

678	27364	92836	89428	61268	74982	36498	32764	81276	81276
986	40932	70987	32123	49817	26346	81287	65491	87364	81276
721	75654	55656	12737	72727	72727	91918	63473	67867	76543
723	87629	37677	32612	53498	71296	28756	18276	98716	87654
7269	76329	74698	76857	98670	27601	56701	57601	73648	15432
591	87364	87265	96710	27630	12673	84769	28743	98127	54321
58	63298	75698	27465	87326	49876	28376	81273	98615	62345
667	87432	74328	78674	29867	32867	67867	86786	43286	43286
667	68768	68763	34234	34238	68768	62342	48273	48768	23456
936	98432	32432	86743	43286	43286	43286	43286	43286	43286
743	86743	86743	39867	32867	86743	43286	43286	43243	86743
741	86743	86743	86743	86743	86743	86743	86743	86743	43567
543	98798	98754	98754	98754	98754	29867	67543	67986	86743
876	87698	69876	87698	69876	87612	12341	34867	86798	63210
867	43298	65656	56756	56123	32143	14321	32143	14321	32143
81	82787	58765	76587	58765	76587	58765	76587	58756	76587
75876	76587	58765	76587	58765	76587	58765	76587	58756	76587

Numbers & Oddities

a.k.a. The Spooks Newsletter

Edition #189, June 2013

Editor: Ary Boender email: ary@luna.nl

Check for previous newsletters, info, sound samples and databases also:

NUMBERS & ODDITIES <http://www.numbersoddities.nl>

SPY NUMBERS ONLINE DATABASE <http://www.spynumbers.com/numbersDB>

UTILITY DXERS FORUM (UDXF) <http://www.udxf.nl>

START PAGE <http://home.luna.nl/~ary>

VOICE STATIONS



E07/ E07a

5773 kHz, 19-06, 2040 UTC:

147 1 32915 7123 69
31801 78272 70821 09475 25433 25303 45083 70117 41378 13044
59090 19570 43356 54478 64781 79076 61336 49361 64511 13135
81872 63409 26689 29738 27761 92460 01482 24996 20807 80576
94495 46490 90894 75391 52931 37784 71557 72643 76004 19869
27702 94996 35545 04875 17631 07717 67090 26489 60163 78292
88622 73160 16524 40151 20710 11980 55792 98928 24955 90012
82476 98741 73457 56633 34694 32647 82702 19045 70782
000 000

14624 kHz, 17-06, 1920 UTC:

865 1 363 48
67727 36605 56798 87741 65732 47244 32651 67308 39802 67918
00228 18770 77490 10203 18664 66984 50450 06410 37355 69855
92928 91563 28714 70698 34946 69591 34361 89760 01293 23759
20452 07291 28808 30624 39580 02664 32033 94717 20209 25921
92828 39192 22749 76024 91491 75626 24611 52072
000 000

8173 kHz, 26-06, 2000 UTC:

7473 kHz, 26-06, 2020 UTC:

147 1 60108 456 96
15747 24046 99981 00242 24805 19924 87952 93247 01914 93427
42767 48326 62255 18523 73293 28047 92312 43356 52859 03699
23312 37507 42534 56753 59979 92311 78751 97973 03838 87496
37278 77866 92032 89432 73411 85291 42165 97415 48038 98858
88402 08802 42870 10722 19597 07253 63567 44711 33410 22679
55183 34487 77049 47028 41706 19355 80919 21018 44109 02108
20044 51644 71919 49309 07584 18930 76468 82676 53487 72285
36228 90118 36581 74996 07922 49731 68387 38879 28606 01312
02880 04261 44007 04082 80088 62433 42202 39563 26615 90139
98734 58901 23171 33285 22495 94242
000 000



E11/ E11a

10487 kHz, 28-06, 1710 UTC:

951 30 Attention

93512 58333 51500 93734 29815 97751 45229 61526 86422 33598
77315 54358 67531 55258 48831 86968 33105 92445 69562 03975
29689 85478 55056 73543 25052 71388 97136 11810 83818 81046
Attention, rpt msg, out



German espionage
suitcase radio

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E25

9450 kHz, 02-06, 1215 UTC: 830 8
6140 kHz, 04-06, 0759 UTC: YL. 360 360 360 360 360 360 360 360 360 360 360 360 360 360 360
MESSAGE MESSAGE MESSAGE
2001 6140 9909 8798 1610 7568 2773 6830 6140 1050
REBEAT REBEAT REBEAT
2001 6140 9909 8798 1610 7568 2773 6830 6140 1050
END OF MESSAGE
END OF TRANSMISSION
6140 kHz, 05-06, 0758 UTC: YL. 360 368 360 368 360 368 360 368 360 368 360 368 360 368 360 368 360 368 360 368 360
368 360 368 360 368 360 368 360 368 368 368 368 368 368
MESSAGE MESSAGE MESSAGE
2001 6140 9909 8798 1610 7568 2773 6830 6140 1050

6140 kHz, 06-06, 0759 UTC:	YL. 364 1 364 1 364 1 364 1 364 1 364 1 364 1 364 1 364 1 364 1 364 1 364 1 364 1 364 1 364 1 END OF MESSAGE END OF TRANSMISSION
6140 kHz, 06-06, 0929 UTC:	YL. 135 24 5 21 Windows dings 135 24 135 24 135 24 135 24 135 24 135 24 135 24 135 24 135 24 135 24 135 24 135 24 135 24 135 24 135 24 135 24 135 24 135 24 135 24 END OF MESSAGE END OF TRANSMISSION
9450 kHz, 10-06, 0844 UTC:	169 2044 5480 1793 4491 2785 8785 0374



5943 kHz, 28-06, 1930 UTC:

218 545 15
63372 48891 07764 10098 47324 72281 90083 72284 09123 87432
83347 77612 13660 93477 99821
545 15 00000



Mode: USB
Frequency: 4625 kHz

13-06, 0720 UTC:	MDZhB 92 634 VALERON 36 ?? 67 03 Prijom
13-06, 0722 UTC:	MDZhB 79 191 LALDYKA 94 66 09 27
13-06, 0723 UTC:	MDZhB 18 835 GALMAN 14 85 88 72
13-06, 0724 UTC:	MDZhB 97 357 TALAUD 02 15 99 40
13-06, 0746 UTC:	MDZhB 87 132 PALATOChNYJ 47 64 76 63
13-06, 0808 UTC:	MDZhB 05 183 BALANUS 22 13 31 19
13-06, 0834 UTC:	MDZhB 58 150 BALAMUTNYJ 24 35 58 30
13-06, 0835 UTC:	MDZhB 57 700 PALAVAN 58 38 60 08
13-06, 1415 UTC:	MDZhB 11 775 SAKSFUL 24 67 72 80
13-06, 1416 UTC:	MDZhB 66 996 ZAKORIUKA 56 84 12 79
13-06, 1437 UTC:	MDZhB 17 611 BAKLAZhNIK 90 04 82 65 PAKAN 43 02 16 55
27-06, 0823 UTC:	MDZhB 97 879 KAIK 97 36 23 59 Prijom
27-06, 0843 UTC:	MDZhB 22 918 LAZUTChIK 59 32 28 05 Prijom
27-06, 0848 UTC:	MDZhB 45 833 FAZULINA 55 30 70 74 KAZUALIZM 97 06 12 08 NAZOLOK 13 65 57 82 Prijom
27-06, 0852 UTC:	MDZhB 52 479 POVREMENKA 96 08 77 13 VAKSA 23 11 76 30 BEL 46 89 99 34 KOVYLIANE 69 67 10 07 Prijom
27-06, 0957 UTC:	MDZhB 27 023 BAZOAR 01 86 86 68 Prijom
27-06, 0928 UTC:	MDZhB 08 116 RAZLOZhKA 60 68 15 43 Prijom
27-06, 0929 UTC:	MDZhB 48 227 RAZBURA 42 28 57 49 Prijom
27-06, 1020 UTC:	MDZhB 11 418 BAZhENJE 24 22 73 33 Prijom
27-06, 1305 UTC:	MDZhB 39 166 LAZhEK 62 48 98 76 Prijom



RMv/RNv/RNAv/RAv ***Russian military stations***

Frequency: various
Mode: USB / voice

RAv	11354	5-6	0530	Russian Naval Air Transport Moscow "Priboj" and unid aircraft
RAv	11360	10-6	1200	Korsar w/Polis, Proselok, Davlenie, Klarnetist in comms checks.
RAv	11360	13-6	1107	Korsar w/76738 reporting landing at undisclosed location w/fuel 40 tons.
RAv	11360	14-6	1158	Korsar w/86825 reporting altitude 210 & landing at Omsk.
RNAv	11354	10-6	1121	Priboj w/52651 (Russian Navy AN-26) reporting passing point at alt 3500 mtrs w/fuel 3000 kgs.



V07

11182 kHz, 02-06, 0720 UTC:

112 112 112 1 112 112 112 1 112 112 112 1 112 112 112 1 112 112 112 1
332 97 332 97
43220 31071 18545 95131 02405 72025 02331 98299 97197 55827
97202 76157 23759 31287 75933 38394 03159 34295 77273 75827
45038 73030 08143 77284 87192 31277 28447 38130 47100 88144
93243 92732 97731 10021 50032 90795 03344 28343 00018 31133
01188 39211 37922 13972 33049 91124 78793 19830 17389 42415
12139 87330 22557 90503 12350 10077 70887 23507 93933 40132
88497 57111 08441 2537? 13399 51910 59588 42813 03573 19333
38387 83869 71921 90737 30101 12778 22508 37423 85707 08338
10990 55798 79055 42223 77135 98088 29993 30434 51233 13342
28735 03828 32377 72521 87391 77951 24848
000 000

12182/11182 kHz, 09-06, 0700/0720 UTC: 112 112 112 000

11182/10282 kHz, 16-06, 0720 UTC: 112 112 112 1 msg

12182/11182 kHz, 23-06, 0700/0720 UTC: 112 112 112 000

12182 kHz, 30-06, 0700 UTC: Test tones before message and then few unintelligible words



V13 - New Star Broadcasting Station

星星廣播電台 Xīngxīng guǎngbò diàntái

V13 changed its frequencies again. According to B1news V13 (New Star Taiwan) also has skeds at 0200, 0300 and 0400 UTC. They always mention these skeds but so far I never managed to hear them. I really wonder if they exist. Could anyone please try these skeds?

Station #1: 15388 kHz, 0200 and 0300 UTC

Station #2: 15388 kHz, 0400 UTC

Station #3: 13750 kHz, 0500 and 0600 UTC

Station #4: 15388 kHz, 0700 and 0800 UTC

Station #4: 13750 kHz, 1200 and 1300 UTC



VC01 - Chinese Robot Chinese Air Defense

Modes: USB and LSB

The station changes its frequencies frequently. Known frequencies:

3036, 3749, 3837, 4075, 4258, 4343, 4410, 4422, 4427, 4480, 4530, 4580, 5195, 5232, 5288, 5303, 5328, 5330, 5393, 5592, 5700, 5742, 5802, 5832, 6209, 6479, 6771, 6840, 6858, 6860, 6949, 6960, 7090, 7351, 7608, 7684, 7726, 7739, 7744, 7756, 7770, 7792, 7864, 7865, 7880, 7890, 7924, 7938, 8000, 8025, 8170, 9000, 9169, 9192, 9290, 9340, 10508 kHz.

Again not found in June. Two months in a row no report. Is it gone?



**British PRM 4180
Portable High
Speed Data
Station**

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MX **Russian Military beacons**

Current cluster frequencies:

3594, 4558, 5154, 7039, 8495, 10872, 13528, 16332, 20048 kHz

Other frequencies:

L 5616.8, 6917.5, 8497.8 kHz

V 3658, 4150, 4084, 5619.5 kHz

R 5466 kHz (seldom reported these days)

W, K, C, N, R various freqs (Air Force)

Cluster beacon slots:

.7 "D", Sevastopol

.8 "P", Kaliningrad

.9 "S", Severomorsk

.0 "C", Moscow

.1 "A", Astrakhan

.2 "F", Vladivostok

.3 "K", Petropavlovsk Kamchatskiy

.4 "M", Magadan

Reported beacons and channel markers.

European Cluster Beacons: D, P, S, C, A, L

Asian Cluster Beacons: F, K, M

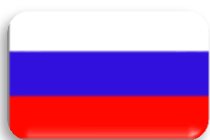
D appeared on both 7039.7 and 7037.2 kHz during several days.

In the morning of June 17th "D D D D O O" was sent on both frequencies. Later more errors appeared "D N D D D N T D N D D M D D T D D D."

Channel markers:

R: 4325.9

V: 4505.5



M01 / M01a / M01c

10741 kHz, 04-06, 0337 UTC: M01c 040 03

637 637 637 67 26

111 999 111 111 999

472 10 =

73614 81634 48453 38495 50164 37261 18365 48362 48306 37473

000 111 000

4905 kHz, 04-06, 2000 UTC: M01

381 30

90389 92859 38458 02721 24441 29702 71631 24648 98620 ?9448

44727 08140 78675 08062 98447 08140 20428 23652 61420 80153

29537 36367 51937 03988 94013 33820 67033 40040 93214 75834

381 30 000

7916 kHz, 20-06, 1854 UTC: M01a

i.p. 333 28920 28920

333 27472 27472

333 27472 27472

111 000

3318 kHz, 20-06, 1933 UTC: M01

i.p. 45830 =
..... 76059 10143 33461 54986 63140 89188 54026 41933 75574
66069 28103 46291 64537 92340 38315 47976 45107 25939 12087
28741 63216 89631 77048 01987 35555 96795 27418 26728 =
45830
111 01987 35555 96795 27418 26728
111 000

4812 kHz, 26-06, 0950 UTC: M01

i.p. 407 407 28
333 28163 28163
333 28163 28163
333 28163 28163
333 28163 281
111 999 5 10 =
55213 48040 13213 81766 83231 86285 62257 334621 42061 =
...2 (Faded completely out – T=0) (0955z)
111 = 17071 111 000



M12

9264/8116 kHz, 04-06, 1850/1910 UTC:

124 1 6453 63
06679 34903 23241 85404 07499 59802 32299 78270 90493 65964
25334 94814 14923 94180 09919 38572 41991 62939 70972 04444
61787 82385 56619 04762 23969 23155 81839 60401 43189 82501
16967 44798 93286 94648 59215 87631 50638 33787 31266 30579
08045 33020 16253 89172 21873 01429 23574 77548 94460 38565
86883 59554 98318 48324 37239 36435 16525 41151 19926 18771
77317 07601 08443
000 000

14524/13524/11524 kHz, 17-06, 1300/1320/1340 UTC:

555 1 6018 141
57251 85249 62215 81073 23694 56988 95407 11261 71035 50693
44680 51794 25500 05452 17206 99388 97874 49164 79271 18763
73373 81592 58568 53641 46721 92318 90025 76541 78132 31975
60669 70743 91459 04900 34581 45500 62368 68229 21069 62901
20007 28823 51960 60382 84736 89365 94419 48522 75818 11434
01638 93522 90200 93443 78856 80891 60381 65721 53309 34065
88547 45531 73783 95506 68667 80091 53187 87917 17820 68897
49109 62777 36868 15004 22285 73773 57640 56571 79363 20923
21341 62354 50844 40244 63054 51413 65366 08882 55892 05013
52349 71311 04389 59594 49691 81239 92114 07829 99577 38031
14553 98520 90915 13079 14833 36168 85583 83860 37190 92745
10650 15559 82258 95646 98205 26365 05955 51037 18064 21988
63145 33187 95140 00034 63765 76326 70873 13053 99531 43708
41996 58008 86969 58410 60429 60907 83086 03531 38877 75894
57311
000 000

9176/7931/9176 kHz, 17-06, 1700/1720/1740 UTC:

257 1 4382 77
16521 42149 93512 49686 57174 76250 42667 02181 47564 31937
12578 08018 23787 60617 72767 60934 14982 33262 42236 99502
88745 77636 51764 28916 30195 07932 82881 66464 58876 92858
22247 41672 12212 24503 87160 79461 58413 13939 10785 41329
33665 60790 36472 84275 79083 28004 79494 45785 99039 39879
89418 99155 02250 27637 41701 62887 63573 69427 36210 39237
37156 53407 80525 45919 14867 04579 75729 08571 20675 09127
28986 06167 02728 10327 49664 86003 07231
000 000



M14

6856 kHz, 11-06, 1820 UTC:

809 809 15 15 = =
87463 11008 73829 46376 40092 38746 19134 09134 72210 97635 87246 29984 11198 77333 46789 = =
809 809 15 15 00000



M18

4503 kHz, 05-06, 1142 UTC: 0254 0255 ...
4407 kHz, 09-06, 1816 UTC: 2217 2218 ...
4503 kHz, 11-06, 1940 UTC: 0140 0140 0140 ...



M21 + variants
Russian Air Defence Forces
Войска ПВО Voyska PVO

Id 0: 3246.5, 5221.5 kHz
Id 8: 5356, 6422, 9368 kHz
Id 9: 10394 kHz

=992338??0?????
=99?2214?9????? =99?2216?9?????
=991435??8????? =11880541325434 =991436??8?????
=11872545384258 =2187290101??3 =991509??8?????? =118785.162570 =2.8781.99 =99152??8??????
=21881901020508 =991819??8?????



M32

Russian/CIS/Ukrainian

Military CW Stations

13396 kHz, 04-06, 0650-1431 UTC:

BYGR 193 21 5 1048 193 = 5fg message in duplex with 12227 kHz
ZJSV DE BYGR RK
E1E6 DE BYGR RK
ZJSV DE BYGR RK
E1E6 DE BYGR RK
XXX XXX WEGI 30 967 BRISNYJ 9352 4382
ZJSV DE BYGR RK
E1E6 DE BYGR RK
KPIZ R 009

13396 kHz, 14-06, 0912-1528 UTC:

PLOX QTC ZWH AR
SKTC 065 16 14 1305 065 = ZWH 132?5 PPPPP V?IchR ÖGMEÄ AGRMÄ FRXIR
SÖRAA MZChPV DNSÜH OÖMRC ÖVÖW VIICChR
ÖGMEÄ ÄRWÄW 915
NZF8 DE SKTC RT ???
SKTC = FRXIR
7B7C DE SKTC RT 65?
NZF8 DE SKTC QTC RK. 7B7C DE SKTC QTC RK
7B7C DE SKTC
GFOJ QRV
QRS RPT AA8
GFOJ R 6??
SKTC QRV
SKTC R 048

13396 kHz, 20-06, 0908-1515 UTC:

NZF8 DE SKTC RK
7B7C DE SKTC RK
SKTC QRV
BK RPT AA17
SKTC R 269
NZF8 DE SKTC RK
7B7C DE SKTC RK
PRSQ QRV
BK BK RPT PBLK
PRSQ R 493
7B7C DE SKTC QTC
SKTC 651 22 20 1848 651 = 569 = FÄBWK UTSKO CETFI BMTÖG ChGÖSR
JHIWW JChMWX NchLAH ZRHVA EÄFX? FChZ? CEÜVE DDNES A?FKY HGXZM
EQÄChÄ TVÄEM OEGVN LFÜJA W?PÄO 468 RPT AL K
PL OXPL QTC AR
SKTC 138 15 20 1904 138 = 095 = NFUOZ PPPPP ÄCNChC ÄRUAW ÖQYOG
AODST Ch?VLQ OKÖÄÄ ChNRRT ChHERQ ÄCNChC ÄRUAW WPPÄW 468
7B7C DE SKTC K 138

10874 kHz, 20-06, 1050 UTC:

7CVS DE X7P7 K
SO8B DE X77 EEEE
SO8B DE X7P7 K
1QGU DE X7P7 K R
KSO8B DE X7P7 K7CV5 DE X7P7 K R
KSOB EEEER K

13396 kHz, 07-06, 1053-1500 UTC:

E1E6 DE BYGR
BYGR QRV
6 K RPT AA5 (frm BYGR, short c/s for E1E6)
6 K RPT AA10 (frm BYGR, short c/s again)
RPT AA17
BYGR R 037 (faded)
ZJSV DE BYGR ZWN ZGM
ZJSV DE BYGR ZXM ZHB
ZJSV DE BYGR R K
E1E6 DE BYGR R K
KPIZ QRV K
KPIZ R 275 K

13396 kHz, 21-06, 1018-1512 UTC:

FFZW DE QTAR RK. TOFE DE QTAR RK
FFZW DE 9ENM QBE QYT9
QTAR QRV
QTAR R 645
FFZW DE QTAR RK. TOFE DE QTAR RK
7TF7 QRV
7TF7 R 912

13396 kHz, 17-06, 0858-1158 UTC:

NZF8 DE GFOJ QBE QYT6
QYT9 K. GFOJ R
7B7C DE SKTC RK
NZF8 DE GFOJ QYT9 GFOJ R
NZF8 DE SKTC ZGO ZHU
SKTC ZXH Z?X
NZF8 DE SKTC RK
7B7C DE SKTC RK

6505 kHz, 14-06, 1029 UTC:

315 09472 20056 60038 71752 46929 72553 5..37 83168 06416 .0821
8...0 00246 52323 75039 2.300 98846 .24.2 53435 95625 14149 37325
67178 20733 46168 ..4.5 86483 .18.. 73867 6... 179 97400 66376 .9427
3.646
= 1032 K
OK RPT PXL = 1010 K
OK K (1031z)
R QTY 8 K
KWV

10144 kHz, 15-06, 1927 UTC. Tentative Russian Mil. Hand sent. Short zero.

36517 59062 81537 38295 75114 89594 78653 44381 49209 349.9
97235 08093 48307 09863 08665 05830 18285 28253 11272 07661
09029 58907 45171 07441 98977 84546 66090 99467 94955 34519
93693 67884 555.8 19894 6438. 32974 14122 98583 56932 22427
97957 2.670 80676 10036 41803 45345 55918 63439 64487 50694
12541 33628 79989 52644 60606 07349 15056 721
MSPR MSPR MSPR 720 60 15 2320 720 =
ZNT 721 =
36517 59062 81537 38295 75114 89594 78653 44381 49209 349.9
97235 08093 48307 09863 08665 05830 18285 28253 11272 07661
09029 58907 45171 07441 98977 84546 66090 99467 94955 34519
93693 67884 555.8 19894 6438. 32974 14122 98583 56932 22427
97957 2.670 80676 10036 41803 45345 55918 63439 64487 50694
12541 33628 79989 52644 60606 07349 15056 721
RPT AL QLN AR

7280 kHz, 14-06, 1012 UTC:

ZI1L DE 4BSH K
ZIJL
DGG1 K
R K
SCSS DE 4BSH K
SCHS K
R K
V9L2 DE 4BSH K
R K
P3OS DE 4BSH K
P3OS K
R K
TPBE DE 4BSH K
IW8D DE 4BSH K
IW8D K
R K
KSAK DE 4BSH K
KSAK
R K
T5SA DE 4BSH K X EEE TS.. DE 4BSH R K
TPBE DE 4BXE EEE TPBE DE 4BSH K
TPBE K
R K (Silent - 1016z)

June 13th was a busy day for the Russian forces. Both voice (S28) and morse stations (M32) were taking part in a monthly communications exercise. Tony submitted the following logs:

13396 kHz, 13-06, 0711-1450 UTC:

0711 XXX XXX WEGI WEGI 65720 OBVENOK 7930 0383
0715 XXX XXX WEGI WEGI 31533 PAÄLO 2072 4516
0740 XXX XXX G5CX F2ET 80467 00514 DEZDOMAYJ 4714 2299
0743 XXX XXX WEGI WEGI 25454 PIRIDYChKA 8319 3797
0800 NZF8 DE SKTC RK. 8B8C DE SKTC. 8B8C DE SKTC RK
0807 XXX XXX 1HSF C1OB JFB5 OEUN 5764? 84509 96779 08844 WERHA 1021 8977
0906 XXX XXX WEGI WEGI 25161 MAÖKAR 3579 2674
1045 NZF8 DE SKTC QRV
1049 SKTC R 924
1057 PLOX QTC AR (repeated numerous times)
1058 SKTC 045 22 13 1452 045 = 119 = HIWAR PPPPP OÄÖMV RCFYT UPIÄÄ KUAXZ UMOVP
ICVMÖ RDFZM LÜIÜV XFSKB ChLHÖT MVMIW QCIKU YJPWN DERAS GDAJI OÄÖMV
RCFYT ÄEPÄO 220
1101 NZF8 DE SKTC R 045 = 8B8C DE SKTC R 045 =
1315 NZF8 DE PRSQ QTC
1316 PRSQ 755 16 13 1704 755 = 688 = RAFFM PPPPP REHFU VWCHP BBLWU OchVXCh PTCNC
JFChDG ChMAYD NChHYÄ BVZÖS REBFU VWCHP ÄEPÄE 220 RPT AL
1359 NZF8 DE SKTC RK. 8B8C DE SKTC RK
1411 XXX XXX WEGI WEGI 87637 EWROPIJ 7205 6552
1416 GFOJ QRV
1422 XXX XXX SXT4 02591 21517 ERON 1174 2227 URONENNYJ 6891 7432
1427 XXX XXX TUZR 5J7Q 04137 61591 KHONDALIT 3951 7113 KLOPOMOR 6151 3320
1432 XXX XXX SXT4 37409 23862 PROPACHNIK 9695 0446 SKOROSTNOJ 7291 6849
1436 7B7C DE GFOJ RPT AA24
1438 GFOJ R 691
1442 XXX XXX XB2M 2V8I 04953 63477 OKORÖA 5877 9371 OPOROK 5604 3211
1446 XXX XXX LNR4 82570 STORONNIK 3248 1697
1449 XXX XXX N1DX 77988 PRONOVKR 4149 4539
1453 XXX XXX G5CX F2ET 63832 76832 WOROTICA 4174 2581
1450 XXX XXX N1DX 77988 PRONOVKR 4149 4539



M32a
Russian Navy
Voyenno-Morskoy Flot Rossii

8345 kHz, 22-06, 0004 UTC:

VVV RCV DE RKO81 QSA? QTC
RKO81 913 20 22 0400 913 = FOR RJH45 RJD38 RJE73 =
22001 99354 70042 22252
(35.4N 04.2W heading SW @ 6-10kts - pic 1)

Picture 1





8345 kHz, 22-06, 0052 UTC:

VVV RCV DE RBIZ QSA? QTC
RBIZ 139 17 22 0400 139 = FOR RJE73 RJH45 =
22001 99349 10358 22200
(34.9N 35.8E Hove to Tartus - pic 2)

Picture 2

8345 kHz, 22-06, 0256-0607 UTC:

RCV DE RHI99 QYT4 QSX 10984

RMP DE RKB91 QSA? QTC
RKB91 343 16 22 1000 343 = SML FOR RJH45 RJD38 =
22061 99537 10036 222?? (stepped on by RKO81)
(53.7N 03.6E probably heading SW @ 6-10kts - pic 3)

Multiple stepped on messages RKB91/RKO81
RKO81 OK QSX 12464

Picture 3



8345 kHz, 04-06, 2230-2358 UTC:

RCV DE RHL80
.....?XLMM ESUPCh HGHWA SLBBV ChHÖCA DASU? IFLÄY PPCEL DRXHCh
QROTN ÜEBKJ OSOAT DZWGD UMGly KTHAY MTWSQ FLOBR
DVEÄZ ?ChWLG WÄZHI MFSJY VOYAL ChIGKN QGLYM (continues for
21mins)..... = AR RHL80
RHL80 OK COR 291 PTWOP
RHL80 OK QTC
VVV RCV DE RFE70 QSA?
RCV DE RFE70 QTC NR 599
RCV DE RFE70 QSA3
RFE70 QRU
RBIZ 11173 59883 ????? GONIL 7799 5762 K
RHL80 599 247 5 0205 599 = MMMMM PLDAX PANRK UKKÖG PANRK UKKÖG
PANRK UKKÖG JIWQT ZIL?Q
QECKO CYHSÜ HUHJF (continues for 30 mins) PTWTU = AR RHL80
RHL80 RPT many times
RHL80 COR 267
RCV DE RHL80 QSA 599?
RCV DE RHL80 QSA4 QSX 6452

8345 kHz, 07-06, 0005-0048 UTC:

VVV RCV DE RKO81 QSA? QTC
RKO81 908 20 7 0400 908 = FOR RJH45 RJD38 RJE73 = 07001 99359 10351
22272
VVV RCV DE RBIZ QSA? QTC
VVV RCV DE RBIZ QSA? QTC
RBIZ 826 17 7 0400 826 = FOR RJE73 RJH45 = 07001 99349 10358 22200
VVV RCV DE RFE70 QSA?

8345 kHz, 17-06, 0011-0606 UTC:

VVV RCV DE RBIZ QSA? QTC
RBIZ 134 17 17 0400 134 = FOR RJE73 RJH45 = 17001 99349 10358 22200
RCV DE RBIZ QSA? RCV DE RBIZ QYT4 QSA NO QCM
RCV DE RKO81 QSA? QTC
RKO81 317 20 17 1000 317 = FOR RJH45 RJD38 RJE73 = 17068 99358 10148
22200

10814 kHz, 04-06, 0412 UTC:

DE RAL2 K
RAL2 DE RIB2 QSA 3 ? K
QSA W
QRU VA
RG.. DE RAL2 K
RBL66 DE RAL2 K
RBL66 QSA 3
QSA 4 QRU VA
SK
R.W2 DE RAL2 K (Silent – 0414z)

8345 kHz, 23-06, 0009-0609 UTC:

RBIZ 23001 99349 10358 22200

VVV RCV DE RKO81 QSA? QTC
RKO81 358 20 23 0400 358 =
FOR RJH45 RJD38 RJE73 =
23001 99354 70043 22200

RMP DE RKB91 QSA? QTC
RMP DE RKB91 QSA? QTC
RMP DE RKB91 QSA1 QRV
RMP DE RKB91 AR 344 RPT 50

8345 kHz, 22-06, 1809-1812 UTC:

RBIZ 656 ?7 22 2200 656 = RJE73 RJH45 =
22??? 99349 10358 22200

VVV RMP DE RKB91 QSA? QTC

RKB91 935 ?5 22 2200 935 = FOR RJH45 RJD38 =
22181 99524 10028 22252

8345 kHz, 21-06, 0007-0610 UTC:

VVV RCV DE RKO81QSA? QTC
RKO81 386 20 21 0400 386 = FOR RJH45 RJD38 RJE73 =
21001 99365 70001 22252 (pos 36.5N 00.1W Heading SW @ 6-10kts)

VVV RCV DE RBIZ QSA? QTC. RBIZ 166 17 21 0400 166 =
RJE73 RJH45 = 21001 99359 10??? 22200

VVV RIW DE RKB91 QSA? QTC
VVV RIW DE RKB91 QSA? QTC. RKB91 166 16 21 0495(sic) 166 =
SML FOR RJH45 RJD38 =
21002 99578 10092 22252 (pos 57.8N 09.2E Heading SW @ 6-10kts)

VVV RCV DE RHI99 QSA? QTC
VVV RCV DE RKO81 QSA? QTC

RKO81 463 ?? 21 1000 463 = FOR RJH45 RJD38 RJE73 =
21061 99366 70010 22252 (pos 36.6N 01.0W heading SW @ 6-10kts)

VVV RMP DE RKB91 QSA? QTC

RKB91 736 16 21 1000 736 = SML FOR RJH45 RJD38 =
21061 99571 10701 22252 (pos 57.1N 70.1E heading SW @ 6-10kts. Clearly
RKB91 has put in the wrong lat and it should be 10071 = a position of 57.1N
07.1E. His report at midnight had a stupid time also of 0495)

12464 kHz, 27-06, 0004-0203 UTC;

VVV RIT DE RKB91 QSA? QTC
RKB91 482 16 27 0401 482 = SML FOR RJH45 RJH74 =
27001 99425 70103 22242

VVV RCV DE RBIZ QSA? QTC

RBIZ 231 17 27 0400 231 = FOR RJE73 RJH45 =
27001 99349 10358 22200

VVV RIT DE RKB91 QSA? QTC
RKB91 905 37 27 0601 905 = SML FOR RIW =
11111 38006 67052 52783 14731 40377 24021 98766 89831 30427
66108 30182 09288 76788 42194 51379 79329 43656 61648 20845
03911 94436 60333 78635 28805 39610 34075 48155 39686 01789
86628 80761 27032 = AR RKB91

8345 kHz, 30-06, 0009-0203 UTC;

VVV RIW DE RKB91 QSA? QTC

RKB91 376 16 30 0401 376 = SML FOR RJH45 RJE73 =
30001 99362 70024 22222

VVV RIW DE RKB91 QSA? QTC

RKB91 119 37 30 0601 119 = SML FOR RCV RMP RIW =
11111 75662 72446 ... 64019 09410 30032 = AR RKB91

VVV RIW DE RKB91 QSA? QTC

RKB91 119 37 30 0601 119 = SML FOR RCV RMP RIW =
11111 75662 72446 30862 50404 92226 41918 55543 38991 78772
94472 33656 86863 18033 96012 44539 97276 55778 59818 55769
23852 10069 20071 52942 64376 22086 88213 15722 36100 57496
64019 09410 30032 = AR RKB91

8345 kHz, 05-06, 0003-0357 UTC:

RCV DE RHL80
VVV RCV DE RKO81 QSA? QTC
RCV DE RHL80 QSA?
VVV RCV DE RKO81 QSA QTC
RKO81 646 20 5 0400 646 = FOR RJH45 RJD38 RJE73 = 05001 99348 10355
22282
VVV RCV DE RBIZ QSA (stepped on by RHL80)
RCV DE RHL80 QYT4 QSX 12794
RBIZ 400 17 5 0400 400 = FOR RJE73 RJH45 = 05001 99349 10358 22200
RCV DE RHL80 QYT4 QSX 12794
RCV DE RHL80 QYT4 QSA?
RCV DE RHL80 QYT4 QLS2
RCV DE RHL80 QYT4 QSA4 QMO
VVV RMP DE RMWT QSA? QTC (strong carrier wave)
VV RIT DE RMWT QSA? QTC
VVV RIT DE RMWT QSA? QTC
VVV RIT DE RMWT QSA? QTC
VVV RIT DE RMWT QSA? QTC
VVV RIT DE RMWT QSA? QTC
RMWT 569 18 5 0430 569 = SML FOR RJH45 RJD38 REG98 =
04211 99565 (stopped)
RMWT OK (then carrier wave ends, must have gone to new freq)
VVV RCV DE RFE70 QSA?
RCV DE RFE70 QSA2 (then QYTs)
VVV RIT DE RMWT QSA? QTC
VVV RIT DE RMWT QSA? QTC
RMWT 959 34 5 0554 959 = SML FOR RMP RJD69 = 11111 64756 94496
02614 71849 06009 87714 77709 77221 99916 29519 08155
13149 01294 97539 67093 65207 01183 23761 79069 54131 88477 14530
55952 22094 36970 80163 54722 98868 16982 05130 = AR RMWT
RCV DE RHL80 QYT4 QSX 12794
VVV RIT DE RMWT QSA? QTC
VVV RCV DE RFE70 QSA? QYT4 QSX 7781
VVV RIT DE RMWT QSA? QTC
VVV RIT DE RMWT QSA? QTC
RMWT 112 18 5 0715 112 = SML FOR RJH45 RJD38 REG98 = 05001 99569
10200 22213
VVV RIT DE RMWT QSA? QTC
RMWT 610 65 5 0745 610 = SML FOR RJH45 RJD38 REG98 = KKXXI 06456
02017 88882 (continues for 6mins)

12464, 22-06, 1212-1406 UTC:

VVV RCV DE RKO81 QSA? QTC VVV RCV DE RKO81 QSA? QTC

RKO81 322 20 22 1600 322 = FOR RJH45 RJD38 RJE73 =
22121 99354 70043 22200

RMP DE RKB91
RMP DE RKB91 QSA1 /NO
RMP DE RKB91 QSA1 /NO AS 10
RIW DE RKB91 QSA? QTC

RKB91 616 24 22 1801 616 = SML FOR RIW RMP = 11111 93187 02961 79178
37335 90904 28040 22149 64065 36868 86831 95379 15268 34396 22722
47522 52296 78165 33531 71527 22020 = AR RKB91

12464 kHz, 27-06, 1208-1548 UTC:

VVV RIW DE RKB91 QSA? QTC VVV RMP DE RKB91 QSA? QTC

RKB91 580 18 27 1601 580 = SML FOR RJH45 RJH74 RJD38 =
27121 99405 70102 22242

VVV RMP DE RKB91 QSA? QTC

RKB91 206 25 27 1801 206 = SML FOR RIT RMP RIW = 11111 26229 24244
04521 39612 12146 70616 52126 92314 15967 59339 73344 40727 75655
63259 70753 51571 21569 90217 98687 27020 = AR RKB91

RIW DE RKB91 QSA2 QRV
RKB91 R 745 RPT 26 33 RKB91 QSL 745



M32b
Russian Naval Aviation
Aviatsiya Voenno-morskogo Flota Rossii

8816 kHz, 07-06, 1046-1334 UTC:

RCB QTO 1030 QRD XLLV XUMO QAH 5200 QBD 200 K
 RCB RPT QBD
 RCB RPT QBD 1500
 26004 DE RCB QRV
 26004 DE RJF94 QRV
 RCB QAY UUWR 1140 QAH 5500 QAL XLLV 1235 QBD 0400 K
 RJF94 QAY UUWR 1140 QAH 5500 QAL XLLV 1235 QBD 0400 K
 RCB QQM XLLV 1238
 52851 DE RJF94



M51 / FAV22
8ème Régiment de
Transmission

Freq.	Date	UTC	8016	9-6	1921	9213	22-6	1057
9121	3-6	2319	5453	11-6	1941	9213	22-6	1535
7529	5-6	1850	5454.5	13-6	0558	9461	22-6	1535
7437	8-6	1010	9213	17-6	1802	8016	24-6	1535
9212	9-6	1916	8016	18-6	1640	7535	26-6	1918



M89
Chinese military

Callsigns and strings:

V 7NPE 7NPE 7NPE DE QV5B QV5B
 V 8CPZ 8CPZ 8CPZ DE XW6W XW6W
 V DKG6 DKG6 DKG6 DE 3A7D 3A7D
 V H2FL H2FL H2FL DE DRV8 DRV8
 V HIE3 HIE3 HIE3 DE 6JDU 6JDU
 V MW3D MW3D MW3D DE 2SLC 2SLC
 V RXP7 RXP7 RXP7 DE CZT2 CZT2
 V WITN WITN WITN DE GNXG GNXG
 VVV Q2M Q2M Q2M DE NYZ NYZ

9NSX DE 3KNI
 8XNJ DE RQE7
 QZEC DE 7JTM
 Y1E DE F6L
 34CX
 6KE5
 61AP

Messages:

3330 kHz, 03-06, 1903 UTC:

EEEGA GA CQ63 RMKS 9S EEEEE
RMKS 3158 TO 5368 0798 0858/5018 UGT COMMS =
58468/0400/BJ1//3158 AR
= 58468/0400/BJ0//3158 AR
= 58468/0400/BJ0//3158 AR
V MW3D MW3D MW3D DE 2SLC 2SLC

5555 kHz, 03-06, 1838 UTC:

746D 3NT4 .AUA 3.5N 3N7N (Cont'd – handsent)
IIIII
2P 2P = =
5N7N NNU3 45DD 5NN4 73UU 77NT U55U 37A3 (Cont'd)
IIII
.. .. = =
AR AR QSL QSL QSL QSL
... KK (1852z)
LLL LA L
EEE VV
9NSX 9NSX DE 3KNI .. K (Unsure of call signs – horrible CW)
LLLL LLL (Silent - 1858z)

10206 kHz, 03-06, 2122 UTC:

3UT4 754. 543D 47NU D5TU UT.3 (Cont'd)
K
7G . = =
6D74 DUAN N7D3 3TUA 3N7D 73ND 5TN3 3AUN
AR AR AR K
R OK U MSG GA
R GA
R G AGA
R OK QSL QSL 0537 K
R USB ISB WK WK K
Switched to voice but very weak – 2138z

11266 kHz, 03-06, 2141 UTC:

QSL 0537 QSL 0537 K (Same QSL as the station on 10207 at 2136z)
OK
KP KP
OK (Silent - 2143z)

6738 kHz, 03-06, 2155 JTC:

4UN7 NT.5 T6.A ND34 U... (Cont'd)

10528 kHz, 04-06, 0335 UTC:

DUA6 ADU6 6T3D DN37 TU73 AR K
OK U GA
OK QSL 1115 K
QSL 1115 QSL 1115 K
OK QSL 111.
HR MSG GA CY K
MSG NR 4066 CK 61 37 0604 104. RMKS 686.16 TO 6865519 K =
43AU 5D46 6354 D53A NU.A 6U73 5643 D46. (Cont'd)
AR K (0316z)
RPT
R RPT 35W = 3 EEE RPT 35W = 4398 4398 AR K
R RPT 38W = 67.3 6783 AR K
QSL 1 EEEE FM 5III EEEE *QSL 1117 K
OK U GA
GA
OK QSL 1122 QSL 1122 K
R
MSG NR 4067 CK 61 28 0604 1040 RMKS 68.5516 TO 6865519. =
43TD 6AUD N7DA TN3A 36NU 453A 6DT5 534A 635U (Cont'd)
AR K
R RPT 53W = 5241 5241 AR K
OK OK OK OK (Silent - 0327z)

12481 kHz, 05-06, 0233 UTC:

IEC =
POXV AR K
R OK N EEE SR WK NR ..65 ..2 K
OK HR
MSG NR 211. CK .1 0 0605 1040 RMKS 686719 TO 686.716 K
C.. =
674. TT... (Cont'd)
AR K
R R. . = .7.. = 674. AR K
R 674D AR = 6.4D AR K
OK GA OK GA
R R R RPT .W K
R R QSL 10.. QSL 1057 K
R R
MSG NR 0111 CK 61 70 046 RMKS 6.817 TO 6855.16 K = =

10456 kHz, 05-06, 0303 UTC:

37. 605 00 686.519 TO ...
= 6AND A46D UA73 6... (Cont'd)
AR K EEE R
U GA U GA
RPT 1 EEE RPT 1W K
R QSL 1122 K
R MSG NR 120 . CK ... 0605 1. RMKS 6865519 TO 6865.16 K =
64T ? 64T7 6NUT AU3. 3TU. 436T (Cont'd)

10528 kHz, 05-06, 0315 UTC:

MSG NR 4125 CK 61 28 0605 RMKS 6865516 TO 6865519 K
R MSG NR 4125 CK 61 28 0605 1040 RMKS 6865516 TO 6865519 K
R =
4AND 7D7A D3A4 65AN DNA5 3... (Cont'd)
This appears to be the other end of the station on 10456 kHz
AR K
QSL 120 K
R R (0321z – Silent)

11161 kHz, 07-06, 0239 UTC:

HR MSG GA
HR 7G GA MSG NR 007/EX CK =
MSG NR 007/EX CK 99 64 0607 1130 RMKS CQ =
3645 3UT5 AT46 356D ADU4 3NTU 564A 7N6A (Cont'd)
AR QSL ? K
36 HR CQ N.L.S. (Silent – 0239z)

10371 kHz, 07-03, 0207 UTC:

ATU6 3T75 AR K
54TA 54TA AR
AR = 3N6A 3N6U AR K
MK..
GA
QSL 11.6 K (Silent - 0214z)

10456 kHz, 07-06, 0216 UTC:

R RPT 62W K
RPT
AS
RPT QSL K

10811 kHz, 05-06, 0225 UTC:

OK QSL 1025 K
R MSG N EEEE
MSG NR 0..RK..59 01020 RMKS EEEE RMKS 68652.9 TO 6865245 K
R N =
6..75ND A546 D... (Cont'd)

10836 kHz, 05-06, 0203 UTC:

QSL 1005 K (0203z)
R HR MSG GA
MSG NR 4120 CK 79 19 04...
MSG NR 4120 CK 79 19 0406 0950 K
R = =
37.5 ..4U 4T73 75.3 6UN4 (Cont'd – fading badly at times)
AR K
R N RPT 68W 0742 ..42 K
R OK U GA K
EEEE U GA K
R GA
R OK
OK QSL 1015 QSL 1015 K
R AS AS (Silent - 0215z)

11324 kHz, 10-06, 0259 UTC:

A4UT 675A 3A47 7T3? (Cont'd)
AR AR K K
OK U GA
OK QSL 1104 1104 K K
OK MSG
MSG NR 8310 CK 61 70 0610 000. RMKS 1675715 TO 1675713 K K =
A3DU 34NU U..3D ... (Cont'd)
AR K K
RPT 50W BT ATD3 K
OK HW RPT ... BT 3A.6
OK U GA
MN
OK

11324 kHz, 10-06, 1244 UTC:

QSL 2043 K
R QSL 2044 QSL 2044 K
R QSL 2044 QSL 2044 K
QSL 2043 K
R QSL 2044 QSL 2044 K (Silent - 1246z)

5555 kHz, 16-06, 1626 UTC:

R K.
GA K
= = A43
R 68 EEEE 1P K
68W K
R R 3P K
82W EEEE 82W K
R QSL 0045 K
R
R R AS K
VVVVVV (Cont'd)
U AU34 AU34 AU34 AU34 AU34 AU34 (Silent - 1648z)

11088 kHz, 11-06, 2111 UTC:

U6T4 N5DA 5U6T 4U5D 3UA7 TU64 UN34 3N4U U6DA .6D3 N73A (cont'd)
AR QSL ? K
OK U GA
... K
OK
MSG NR 2047 CK 65 65 0612 0500 RMKS 2549... TO 2549385 =
ANUD 5634 (Cont'd)

11214 kHz, 10-06, 0234 UTC:

3A5D 6NA3 6TU7 ND7U 3746 7U4N AN74 3A67 AR K
R K
RPT 6.W = .1.7 3167 AR K
OK UH. WK NR K
UUHR WK NR ? K
UHR KW NR ? K
OK OK
SK SK

11271 kHz, 10-06, 0241 UTC:

VVVV VVVV VV 8XNJ DE RQE7 K
R QSA 2 ICE BT GSY AR K
R HR MSG GA K
HR MSG GA
MSG NR 5729 CK 79 55 0051 01040 RMKS 2549792 TO 2549795 K =
5EAA 5.U TUAD 3ANU N.. (Cont'd)
AR QSL ? K
R R GA
QSL 1052 K
R BOZBHGHFESWK K (Silent - 0253z)

11238 kHz, 10-06, 1253 UTC:

DE 7JTM
6KE5 K
R QSL ? K
R UWKNR K
R
HR WK NR 1675 5194 K
..PY K
R UWK NR K
VV 34CX K
R UWK ..
VV ... F K
R 61AP K
R WN .. K
.. DE 7JTM 7JTM KKPYP
This appears to be the control station for the stations on 11226 kHz
VV Q7EC QZEC DE 7JTM 7JTM SK SK

11324 kHz, 10-06, 0248 UTC:

55061 170 RMKS 25497.. Eee RMKS 2549795 TO 2549792 K =
UNTA 7.. 357. 64.. (Cont'd)
AR

7582 kHz, 18-06, 1001 UTC:

UGT COMM BT 3819/1855/Z67/928. AR
VV TC2 UGT COMM BT 3901/1930/G70/983 AR
VV TC2 UGT COMM BT 3901/1930/G70/9283 AR
V V TC3 UGT COMM BT 3656/2105/Z63/9289 AR
VV TC3 UGT COMM BT 3656/2105/Z63/9289 AR
VV TC4 7G NR 06/CCK CK 25 37 0618 0240 RMKS 9289 TO
3064/3808/3049/8789/3956/9069/3966/8002 AR
VV TC4 7G NR 06/CCK CK 25 37 0618 0240 RMKS 9289 TO
3064/3808/3049/8789/3956/9069/3966/8002 AR
VV TC5 UGT COMM BT 3399/0315/Z67/9289 AR
VV TC5 UGT COMM BT 3399/0315/Z67/9289 AR
VV TC6 UGT COMM BT 3901/0450/G70/9283 AR
VV TC6 UGT COMM BT 3901/0450/G70/9283 AR
VV TC7 UGT COMM BT 3568/0930/Z68/9289 AR
VV TC7 UGT COMM BT 3568/0930/Z68/9289 AR
VV TC8 UGT COMM BT 3651/1000/G70/9283 AR
VV TC8 UGT COMM BT 3651/1000/G70/9283 AR
VV TC9 UGT COMM BT 3561/1315/796/9289 AR
VV TC9 UGT COMM BT 3561/1315/79/9289 AR
VV TC10 UGT COMM BT 3984/1530/Z65/9289 AR
VV TC10 UGT COMM BT 3984/1530/Z65/9289 AR

VARIOUS MODES

M42 & X06



Modes:
Various digital modes, CW,
Tones (Мазелка / Mazielka)

Russian Government & Intelligence



M42 logs

frequency	date	UTC	remarks	mode
11068	1-6	0824	Russian Intel.	FSK 200/1000
16011	1-6	1105	Russian Intel	FSK 200/1000
16322	1-6	1816	Russian Intel. 576 1 00000 +++++ +++++ 162	Baudot 200/500
16320	3-6	0150	Russian Intel.	FSK 200/1000
16320	4-6	0150	Russian Intel.	FSK 200/1000
17471	5-6	0003	Russian Intel, Moscow	Baudot 200/500
16320	5-6	0150	Russian Intel.	FSK 200/1000
19396	5-6	0604	Russian Intel.	FSK 200/500
10526	5-6	1830	Russian gov/intel. 0-msg	Baudot 200/500
14621	5-6	1841	Russian Intel 576 1 0000 +++++ +++++ 162	Baudot 200/500
11024	6-6	1900	Russian Intel 6 20	FSK 200/500
9092	6-6	1910	Russian Intel 6 20	FSK 200/500
6785	6-6	1920	Russian Intel 6 20	FSK 200/500
13381	8-6	0810	Russian Intel.	FSK 200/1000
11068	8-6	0820	Russian Intel.	FSK 200/1000
14446	8-6	0910	Russian Intel.	FSK 200/1000
12189	8-6	0920	Russian Intel.	FSK 200/1000
16011	8-6	1054	Russian Intel, Moscow	FSK 200/1000
16320	10-6	0150	Russian Intel.	FSK 200/1000
16320	11-6	0150	Russian Intel.	FSK 200/1000
9067	11-6	1710	Russian Intel.	FSK 200/1000
11122	11-6	1720	Russian Intel.	FSK 200/1000
11024	13-6	0700	Russian Intel. 00000+++++++162)5761	FSK 200/1000
6786	13-6	0720	Russian Intel. 00000+++++++162)5761	FSK 200/1000
11146	13-6	1528	Russian Intel. 0-msg	FSK 200/1000
9153	13-6	1537	Russian Intel. 0-msg	FSK 200/1000
11024	13-6	1900	Russian gov/intel. 0-msg	Baudot 200/500
13381	15-6	0810	Russian Intel.	FSK 200/1000
11068	15-6	0820	Russian Intel.	FSK 200/1000
14406	15-6	1110	Russian Intel.	FSK 200/1000
12182	15-6	1120	Russian Intel.	FSK 200/1000
17496	15-6	1200	Russian Intel 8 01	FSK 200/500
15932	15-6	1209	Russian Intel. 0-msg	FSK 200/1000
15932	15-6	1210	Russian Intel 8 01	FSK 200/500
13484	15-6	1220	Russian gov/intel. 0-msg	Baudot 200/500
13481	15-6	1220	Russian Intel 8 01	FSK 200/500

frequency	date	UTC	remarks	mode
16320	17-6	0150	Russian Intel. Link ID 13366	FSK 200/1000
16320	18-6	0150	Russian Intel. Link ID 13346	FSK 200/1000
16320	19-6	0150	Russian Intel. Link ID 13346	FSK 200/1000
11611	21-6	0653	Russian Intel.	FSK 200/1000
11474	21-6	0700	Russian Intel.	FSK 200/1000
9233	21-6	0710	Russian Intel.	FSK 200/1000
9937	21-6	0745	Russian Intel.	FSK 200/1000
12167	21-6	0750	Russian Intel.	FSK 200/1000
16190	22-6	0900	Russian Intel.	FSK 200/1000
19878	22-6	1225	Russian diplo Msg on link 00063	USB/Serdolik MFSK-34/OFDM-34
16320	24-6	0150	Russian Intel.	FSK 200/1000
5089	24-6	1907	Russian Intel.	FSK 200/1000
7337	24-6	1910	Russian Intel.	FSK 200/1000
16320	25-6	0150	Russian Intel. Link ID 08196	FSK 200/1000
6791	25-6	1706	Russian Intel.	FSK 200/1000
9067	25-6	1710	Russian Intel.	FSK 200/1000
11122	25-6	1720	Russian Intel.	FSK 200/1000
16320	26-6	0150	Russian Intel.	FSK 200/1000
16320	27-6	0150	Russian Intel. Link ID 00058	FSK 200/1000
11146	27-6	1532	Russian Intel.	FSK 200/1000
9153	27-6	1540	Russian Intel.	FSK 200/1000
16320	28-6	0150	Russian Intel.	FSK 200/1000
14462	30-6	0935	Russian diplo receiving tfc from unid embassy	USB/Serdolik MFSK-34/ODFM-45

X06 logs

frequency	date	UTC	remarks
14650	1-6	1223	Mazielka. Sequence: 215346
14650	1-6	1239	Mazielka. Sequence: 215346
16220	7-6	0855	Mazielka. Sequence: 324165
11031	7-6	0906	Mazielka. Sequence: 324165
14813	13-6	1410	Mazielka
9352	14-6	1920	Mazielka. Sequence: 216354
13875	15-6	1503	Mazielka. Sequence: 414265

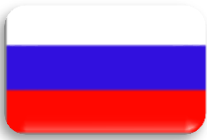


XSL a.k.a. Slot Machine
Japan Maritime Self-Defense Force
海上自衛隊 Kaijō Jieitai

Copied on 22-06, 1312 UTC at 4153, 4231.5, 6250, 6417, 6445, 8313, 8588, 8703.5 kHz.

Mode: QPSK 1500bd

Reportedly telemetry transmitted by the Japanese navy.



XP family

9137 kHz, 04-06, 1811 UTC:

491 491 491 1 491 491 491 1 491 491 491 1

Message Start

00234 00323 52488 66099 68372 68210 71155 23203 16330 50805 88384 28333 59568 46024 12531 39219 41335 28373
80727 82791 76665 74482 44276 71859 69661 74652 62386 77182 31756 78557 59884 59270 99501 95662 40878 37906
46582 76756 49908 03500 78045 24209 07967 08219 34071 78989 48832 13822 57462 98384 72231 72083 52021 97402
62719 12210 40639 08494 52728 45407 45282 63546 37057 78394

Block Sync

04706 28709 40093 21836 65158 01056 23570 51286 55621 91397 83500 31989 82957 01089 17667 90031 28849 98702
11892 94809 23784 25467 54406 45251 50640 79216 58039 51513 47055 13301112214 64224 29866640614 74833
34112 01304 17857 84148 55762 57609 42047728420 99663 25594 93967 52843 90202 55837 26699 11833 29131 29695
82465 314 55233 90520 96742 50701 03005 82319 89978 55923 18971 666662266222257147 2221 7448822437
1102278327 75848 2556 9661 99880 8945 44711 44681 44566 75598851196 2182

0114 2447 10077 1079 5224 488111589999664577 988 4999 055446009110 88719939999339 88667 52335 6574 6986
0879

59977 24648665251772708 27506 71043 23746 66781 88839 98812 56 55739 67647 35099 49423 09228443615 19992
60932 11856 91522 04973 33527 72264 61210 13949 46461 94906

Block Sync

89257 24264 84207 92659 33846 72001 19211 34265 00988 74437 22158 69032 89021 38307 21515 85095 37242 48016
42383440828 70042 44751 54203 19397 77675 73957 14984 19755 43400 32116 87220 42587 14971 69726 56726 60666
25907 26908 33411 53771 78494 06747 02035 66971 89275 88566 44278 84563 77310 51023 68808 27768 35852 05229
57818 80997 29588 95413 82740 95344 02874 33517 36383 24404

Block Sync

26633 51302 49629 65783 43509 39061 68367 94883 82569 37713 26160 48860 75936 22955 12149 41833 34384 23719
66761 28660 23289 39721 47114 76957 65890 73543 04208 95591 91668 20646 70966 44888 02310 86623 73207 3478
49618 28187 57451 70530 34893 36782 07428 00588 76758 83670 22305 60462 74594 89191 54662 85515 28779 65082
91534 10340 77305 06795 40600 42135 65151 96886 40706 86306

Block Sync

08625 31432 35842 75426 25522 73111

10438/9938/9183 kHz, 11-06,
1730/1750/1810 UTC

491 491 491 000 491 491 491 000 491 491 491 000
03107 00001 00000 10140



North Korean diplomatic stations

20048.5	14-6	1933	Unid DPRK Embassy	DPRK-ARQ 600/600
16718.5	19-6	1325	North Korean Embassy Europe or North Africa in calling mode	DPRK-ARQ 600/600
16318.5	25-6	1123	North Korean MFA Pyongyang wkg UNID embassy	DPRK-ARQ 1200/1200



Chinese diplomatic stations

10913.97 kHz, 05-06, 1150 UTC, Mode: 4+4 75/1000

CALL2531

=XKGB64849454 =XKGB64849454 =XKGB64849454 =XKGB64849454 =XKGB64849454

=XKXB648494 VXKGB64849454 =XKGB64849454 =XKGB64849454

=XKGB64849454 STOPSTOPSTOP

STOP XYXYXYXYXYXYXY

QSA3 QSA?

///\$TO

XYXYXYXYXYXYXY

QSA3 QSA? ///\$

XYXYXYXYXYXYXY

NR 215 MSG CLS 02 ///\$#?

XYXYXY

XHCR180 499 02 0605 1930

2842 2602 5549 4741 7418 8371 7281 8076 0161 0021 etc.

UTILITY ROUND-UP



Unid stations

4028 kHz, 07-06, in progress. Copied by JPL from 0146 to 2001 UTC. Still in progress at that time.

Unid station. Ideas anyone??

1

166

174 174 174 82791 82791

174 174 174 82791 82791

174 174 174 82792 82.91

174

1.. 174 174 82791 82791

2 AS 4

174 174 82791 82791

174 172 .74 82791 82791

174 174 174 82791 82791

174 174 174 174 82791

174 174 174 83973 83973

174 174 174 83973 83973

174 174 174 83973 83973

174 174 174 83973 83973

174



Pirates

6851.8 kHz, 07-06, 2025 UTC: Beacon "PRV", Preveza, GRC



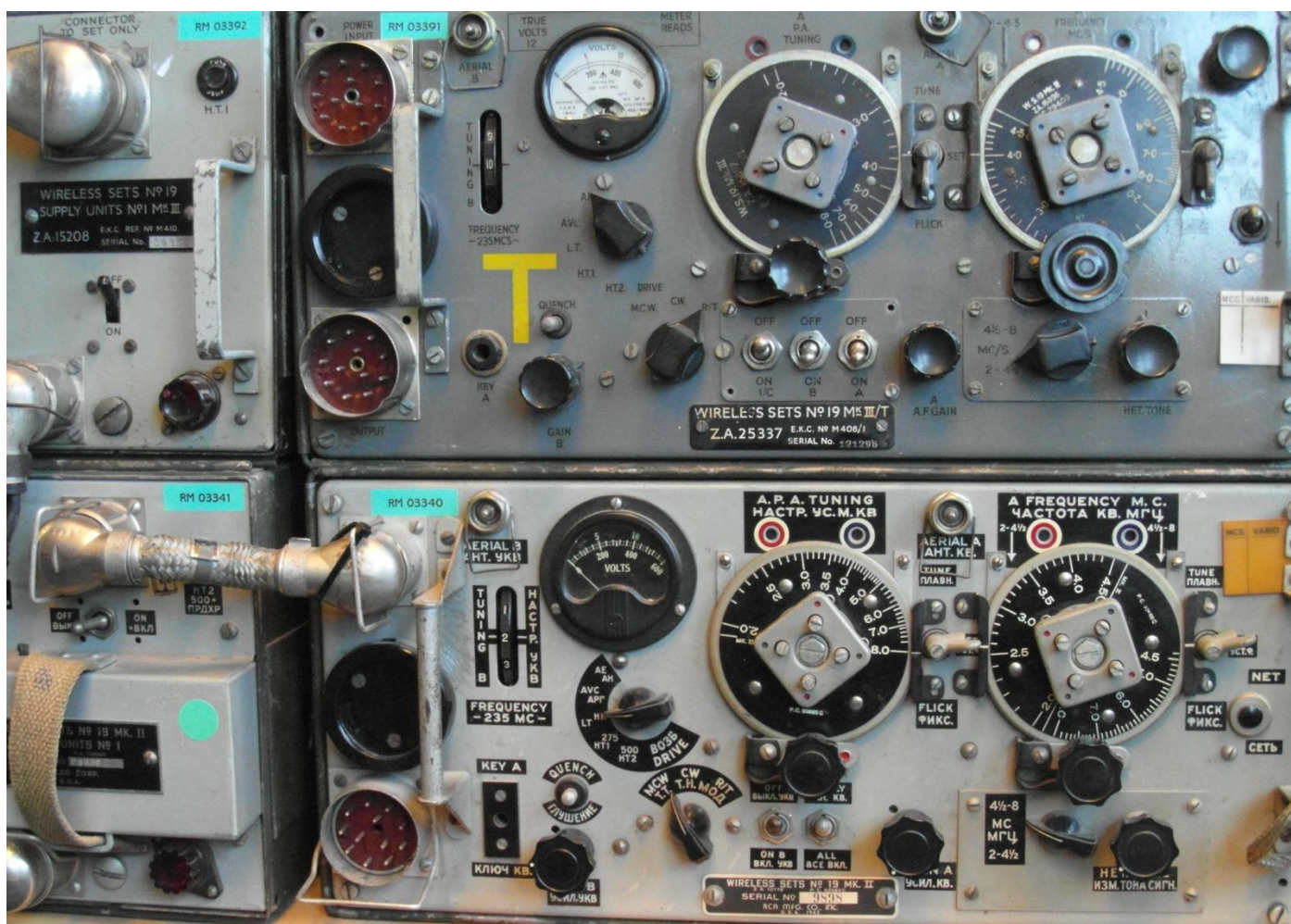
Unid 10-minutes stations

4225 9-6 1811 Unid 10-minutes net: WF3A //3505 kHz
3505 9-6 1811 Unid 10-minutes net: WF3A //4225 kHz

The top set is a Wireless Set No. 19 Mk III, a Second World War mobile radio transceiver used by armored troops of the British Army.

The set at the bottom is the Mk II that used English/Cyrillic front panel lettering, the result of a Lend-Lease contract between Canada and the Soviet Red Army.

Both sets are on display at the Radio Museet in Göteborg, Sweden.



TOP SECRET

Intelligence profiles

During the past years N&O has published quite a lot of intelligence profiles. The series ended in May. Below the complete index.

Country	N&O	Date	Country	N&O	Date	Country	N&O	Date
Israel	006	09-1998	Mexico	097	07-2005	Estonia	176	05-2012
Iraq	009	12-1998	Equatorial Guinea	098	08-2005	Turkmenistan	176	05-2012
France	012	03-1999	Ireland	099	09-2005	Lithuania	176	05-2012
China	014	05-1999	Brazil	100	10-2005	Norway	177	06-2012
Albania	018	09-1999	Mongolia	101	11-2005	Sweden	177	06-2012
South Korea	020	11-1999	Taiwan	104	02-2006	Finland	177	06-2012
North Korea	020	11-1999	Belarus	105	03-2006	Singapore	178	07-2012
Portugal	026	05-2000	Cyprus	106	04-2006	Bangladesh	178	07-2012
Hungary	027	06-2000	Denmark	110	09-2006	Fiji	178	07-2012
Vatican	030	10-2000	Indonesia	119	07-2007	Nicaragua	179	08-2012
Czechoslovakia	037	05-2001	Kenya	120	08-2007	Chile	179	08-2012
Czech Rep	037	05-2001	Germany	124	12-2007	Venezuela	179	08-2012
Slovakia	037	05-2001	Nederland	125	01-2008	Saudi Arabia	180	09-2012
Cuba	044	12-2001	Somalia	136	01-2009	New Zealand	180	09-2012
Luxembourg	047	03-2002	Nepal	137	02-2009	Afghanistan	180	09-2012
Belgium	047	03-2002	Canada	141	06-2009	Germany	181	10-2012
Pakistan	051	07-2002	Italy	142	07-2009	Spain	181	10-2012
India	052	08-2002	Lebanon	143	08-2009	Austria	181	10-2012
Macedonia	056	12-2002	Argentina	143	06-2010	USA	182	11-2012
Croatia	056	12-2002	Romania	144	09-2009	UK	182	11-2012
Slovenia	056	12-2002	Russia	145	10-2009	Australia	183	12-2012
Bosnia-Herzegovina	056	12-2002	Vietnam	150	03-2010	Jamaica	184	01-2013
Yugoslavia	056	12-2002	Algeria	152	05-2010	Bahamas	184	01-2013
Libya	059	04-2003	Jordan	161	02-2011	Barbados	184	01-2013
Poland	060	04-2003	Yemen	162	03-2011	Dominican Republic	184	01-2013
Syria	061	05-2003	Europe	163	04-2011	Peru	185	02-2013
Zimbabwe	062	06-2003	Morocco	164	05-2011	Panama	185	02-2013
Nigeria	063	09-2003	Iran	166	07-2011	Colombia	185	02-2013
South Africa	064	08-2003	Bahrain	167	08-2011	Brunei	186	03-2013
Egypt	067	11-2003	Iceland	168	09-2011	Papua New Guinea	186	03-2013
Ukraine	068	12-2003	Japan	169	11-2011	Sri Lanka	186	03-2013
Latvia	069	01-2004	Philippines	170	11-2011	Malaysia	186	02-2013
Armenia	072	04-2004	Bulgaria	171	12-2011	Ghana	187	04-2013
Greece	073	05-2004	Mozambique	172	01-2012	Ethiopia	187	04-2013
Switzerland	074	06-2004	Kazakhstan	173	02-2012	Eritrea	187	04-2013
Palestine	089	11-2004	Tadjikistan	173	02-2012	Tanzania	187	04-2013
Turkey	090	12-2004	Georgia	174	03-2012	Montenegro	188	05-2013
Maldives	091	01-2005	Azerbaijan	174	03-2012	Kuwait	188	05-2013
Burma	094	04-2005	Moldova	175	04-2012	Qatar	188	05-2013
Sudan	095	05-2005	Kyrgyzstan	175	04-2012	Botswana	188	05-2013
Costa Rica	096	06-2005	Uzbekistan	175	04-2012			

LOGS SECTION

Enigma	Freq.	Date	Day	UTC	Remarks	Mode	Ctrb
---	3505	4-4-2013		2112	Unid 10-minutes net: WF3A	CW	(IARUMS)
---	3502	9-4-2013		2049	Unid 10-minutes net: WF3A	CW	(IARUMS)
---	3505	15-4-2013		2149	Unid 10-minutes net: WF3A	CW	(IARUMS)
---	4028	7-6-2013	Fri	0146	Unid. 1 166 174 174 174 82791 82791 (see N&O 189)	CW	(JPL-Sib)
---	4225	9-6-2013	Sun	1811	Unid 10-minutes net: WF3A //3505 kHz	CW	(JPL-Sib)
---	3505	9-6-2013	Sun	1811	Unid 10-minutes net: WF3A //4225 kHz	CW	(JPL-Sib)
CHN	21253	6-4-2013		0250	Chinese diplo	4+4 75/1000	(IARUMS)
CHN	21253	21-4-2013		0712	Chinese diplo	4+4 75/1000	(IARUMS)
CHN	21363	27-4-2013		0718	Chinese diplo	4+4 75/1000	(IARUMS)
CHN	21363	28-4-2013		0633	Chinese diplo	4+4 75/1000	(IARUMS)
CHN	21253	28-4-2013		0712	Chinese diplo	4+4 75/1000	(IARUMS)
CHN	21363	30-4-2013		0647	Chinese diplo	4+4 75/1000	(IARUMS)
CHN	14050	30-4-2013		0716	Chinese diplo	4+4 75/1000	(IARUMS)
CHN	14059	30-4-2013		0718	Chinese diplo	4+4 75/1000	(IARUMS)
CHN	10913.97	5-6-2013	Wed	1150	Chinese Gov/Intel. CALL2531	4+4 75/1000	(EW)
DPRK	20048.5	14-6-2013	Fri	1933	Unid DPRK Embassy	DPRK-ARQ 600/600	(MCO)
DPRK	16718.5	19-6-2013	Wed	1325	North Korean Embassy Europe or North Africa in calling mode	DPRK-ARQ 600/600	(MCO)
DPRK	16318.5	25-6-2013	Tue	1123	North Korean MFA Pyongyang wkg UNID embassy	DPRK-ARQ 1200/1200	(MCO)
E06	5731	7-6-2013	Fri	2130	315 76 15=56453	AM	(HFD)
E06	14753	11-6-2013	Tue	0715	i.p.	AM	(BCI)
E06	14710	20-6-2013	Thu	0500	328 759 106=81751	AM	(HFD)
E06	16240	20-6-2013	Thu	0600	328	AM	(HFD)
E06	5731	21-6-2013	Fri	2130	315 776 15=56453 modul. distorted	AM	(HFD)
E07	15824	3-6-2013	Mon	1900	865 1 489 110= 92660	AM	(HFD)
E07	14624	3-6-2013	Mon	1920	865 1	AM	(HFD)
E07	13524	3-6-2013	Mon	1940	865 1	AM	(HFD)
E07	14842	5-6-2013	Wed	1705	ip	AM	(HFD)
E07	14624	5-6-2013	Wed	1923	i.p.	AM	(MCO)
E07	12213	6-6-2013	Thu	2010	273 0	AM	(HFD)
E07	10714	6-6-2013	Thu	2031	273 0	AM	(HFD)
E07	14842	12-6-2013	Wed	1700	841 0	AM	(HFD)
E07	13442	12-6-2013	Wed	1720	841 0	AM	(HFD)
E07	13442	12-6-2013	Wed	1720	845	USB	(FMB)
E07	14625	12-6-2013	Wed	1920	865 0	USB	(FMB)
E07	7473	12-6-2013	Wed	2020	147 147 147 000	AM	(Dan)
E07	14842	16-6-2013	Sun	1700	841 1 538 11=35387	AM	(HFD)
E07	13442	16-6-2013	Sun	1720	841 1	AM	(HFD)
E07	12142	16-6-2013	Sun	1740	841 1	AM	(HFD)
E07	15825	17-6-2013	Mon	1901	885 1	USB	(FMB)
E07	14624	17-6-2013	Mon	1920	865 1 363 48 67727 36605 56798 ... 75626 24611 52072 000 000	AM	(AB)
E07	14625	17-6-2013	Mon	1920	885 1	USB	(FMB)
E07a	8173	5-6-2013	Wed	2000	147 0	USB	(HFD)
E07a	7473	5-6-2013	Wed	2020	147 0	USB	(HFD)
E07a	14373	14-6-2013	Fri	0820	338 0	USB	(HFD)
E07a	13373	15-6-2013	Sat	0800	338 0	USB	(HFD)
E07a	7473	19-6-2013	Wed	2020	147 1 32915	USB	(GHn)
E07a	5773	19-6-2013	Wed	2040	147 1 32915	USB	(KK2/GHn)
E07a	7437	20-6-2013	Thu	0430	411 1 32915 7123 69=31801	USB	(HFD)
E07a	8137	20-6-2013	Thu	0450	411 1 32915	USB	(HFD)
E07a	9137	20-6-2013	Thu	0510	411 1-32915	USB	(HFD)
E07a	12182	21-6-2013	Fri	1510	101 1 18773 917 77 =51132	USB	(HFD)
E07a	11082	21-6-2013	Fri	1530	101 1 18773	USB	(HFD)
E07a	10182	21-6-2013	Fri	1550	101 1 18773	USB	(HFD)
E07a	8173	26-6-2013	Wed	2000	147 1 60108 456 96 15747 24046 99981 ... 33285 22495 94242 000 000	USB	(GHn)
E07a	7473	26-6-2013	Wed	2020	147 1 60108 456 96 15747 24046 99981 ... 33285 22495 94242 000 000	USB	(GHn)
E11	13427	17-6-2013	Mon	0900	537735 46362 58 42 86014	CW	(FN)
E11	16335	17-6-2013	Mon	1540	228/00	USB	(AB)
E11	12924	21-6-2013	Fri	0830	649/00	USB	(FN)

Enigma	Freq.	Date	Day	UTC	Remarks	Mode	Ctrb
E11	9200	28-6-2013	Fri	2000	576/00	USB	(ATC)
E11	3815	28-6-2013	Fri	2000	262/00	USB	(MPJ)
E11	3815	30-6-2013	Sun	2000	262/00	USB	(skx)
E11a	14518	1-6-2013	Sat	1810	983/12 attention 71876 82283 21871 79996 93677 29696 72751 12142 04068 12393	USB	(Dan)
E11a	13455	11-6-2013	Tue	1810	988/10 Attention 82733 008861 10094 41782 10908 10345 72721 56442 46809 79537 Attention, msg rptd, out	USB	(AB/GHn)
E11a	14518	15-6-2013	Sat	1800	YL/EE: 988/10 79731 29776 32841 41430 59634 88373 51519 44049 53727 61801 OUT	USB	(skx)
E11a	14518	18-6-2013	Tue	1810	982/10 Attention 05375 87440 65968 19492 52016 24391 02787 62166 61628 19286 Attention, rpt msg, out	USB	(GHn)
E11a	4909	22-6-2013	Sat	0900	248/36 00831 56774	USB	(FN)
E11a	14518	25-6-2013	Tue	1810	982/10 Attention 28136 43611 47960 06881 67501 73744 00057 67004 15833 83853 att, msg rpt, out	USB	(GHn)
E11a	16388	28-6-2013	Fri	1110	956/40 94908 56254 45709 03023 39471 ... 27401 93616 63243 33364 54837	USB	(MPJ)
E11a	10487	28-6-2013	Fri	1710	951 30 Attention 93512 58333 51500 ... 11810 83818 81046 att, rpt msg, out	USB	(ATC)
E25	6140	20-5-2013		0812	185 4909 2250 5602 7525 4342 2716 4295 7115 4491 2785 8785 037	AM	(MG)
E25	6140	4-6-2013	Tue	0759	YL. 360 360 360 MESSAGE 2001 6140 9909 8798 1610 7568 2773 6830 6140 1050	AM	(AIK)
E25	6140	5-6-2013	Wed	0758	YL. 360 368 MESSAGE 2001 6140 9909 8798 1610 7568 2773 6830 6140 1050	AM	(AIK)
E25	6140	10-6-2013	Mon	0844	169 2044 5480 1793	AM	(MG)
E25a	9450	12-5-2013		1215	830 6	AM	(MG)
E25a	9450	18-5-2013		1215	830 7	AM	(MG)
E25a	9450	2-6-2013	Sun	1212	830 8	AM	(MG)
E25a	9450	2-6-2013	Sun	1215	830 8	AM	(MG)
E25a	6140	6-6-2013	Thu	0759	YL. 364 1 END OF MESSAGE END OF TRANSMISSION	AM	(AIK)
E25a	6140	6-6-2013	Thu	0929	YL. 135 24 5 21 Windows dings 135 24 END OF MESSAGE END OF TRANSMISSION	AM	(AIK)
G06	11424	7-6-2013	Fri	1909	(ip) 587 102 00000	USB	(FMB)
G06	9269	7-6-2013	Fri	2000	239 587 102 99696 ...	USB	(FMB)
G06	11423	8-6-2013	Sat	0019		USB	
G06	5476	10-6-2013	Mon	1700	564 0	CW	(HFD)
G06	6888	13-6-2013	Thu	1830	842	USB	(FMB)
G06	5943	14-6-2013	Fri	1930	218 545 15 63372 48891 27764 15298 47324 72281 92283 72287 29123 87432 83347 77612 13662 93477 99821 545 15 000000	AM	(GHn)
G06	6948	17-6-2013	Mon	0800	215 215 215 00000	AM	(FN)
G06	11423	21-6-2013	Fri	1900	239 587 122 99696	AM	(FN)
G06	5943	28-6-2013	Fri	1930	218 545 15 63372 48891 07764 10098 47324 72281 90083 72284 09123 87432 83347 77612 13660 93477 99821 545 15 00000	AM	(GHn/ATC)
G11	5825	11-6-2013	Tue	1855	270/00	USB	(AB)
G11	5815	11-6-2013	Tue	1855	270/00	USB	(AB/GHn)
G11	3815	14-6-2013	Fri	2000	262/00	USB	(GHn)
G11	3815	23-6-2013	Sun	2000	262/00	USB	(GHn)
G11	5815	30-6-2013	Sun	1755	270/00	USB	(MPJ/ATC)
G11	5815	30-6-2013	Sun	1755	270/00	USB	(skx)
G11	3815	30-6-2013	Sun	2000	262/00	USB	(ATC/MPJ)
HM01	13435	25-5-2013		0600	34465 71674 07132 68264 76683 68526	AM/RDFT	(KC2TTK)
HM01	12180	1-6-2013	Sat	1000	34467 71676 07134 68266 76685 43541	AM/RDFT	(Dan)
HM01	17540	1-6-2013	Sat	2300	34467 71676 07134 68266 76685 43541	AM/RDFT	(Dan)
HM01	11530	5-6-2013	Wed	2300	34467 71676 07134 68266 76685 43541	AM/RDFT	(Dan)
HM01	11530	10-6-2013	Mon	2300	very noisy	AM/RDFT	(Dan)
HM01	10715	12-6-2013	Wed	2300	Voice echo	AM	(BCA)
HM01	11530	12-6-2013	Wed	2330	voice echo	AM	(BCA-HOL)
HM01	10345	13-6-2013	Thu	0620	DGI Havana YL call up 14467 01676 07134 78266 76685 42541 ...	AM/RDFT	(LG2)
HM01	14375	20-6-2013	Thu	0503	5FG + data, Spanish YL, 43641, xx44x0, xx1606, 0x134, 78266, 96685, 42491, 94469, 91693, 09134, 68166, 16685	AM/RDFT	(AnHNG)
HM01	5855	30-6-2013	Sun	1000	i.p.	AM	(BCA)
M01	4905	4-6-2013	Tue	2000	025 381 30 90389.....75834	CW	(ATC)

Enigma	Freq.	Date	Day	UTC	Remarks	Mode	Ctrb
M01	5468	14-6-2013	Fri	1910	i.p. 10089 24230 11071 19053 58711 60216 42402 65119 53277 21817 ... 60005 26295 73774 = = 372 372 31 31 000	CW	(JPL-FNL)
M01	6434	29-6-2013	Sat	1500	310 310 20 30 = = 50000 78466 98923 41273 25162 ... 00879 90908 06434 98291 85049 = = 319 319 0 30 30 000. Many obvious uncorrected errors. //6435	CW	(MPJ)
M01a	9411	7-6-2013	Fri	0535	005 33 111 999 111 999...= 281 2t = 15639 ...	CW	(FMB)
M01a	9128	20-6-2013	Thu	0537	35164 35164 111 000	CW	(FMB)
M01a	7916	20-6-2013	Thu	1854	i.p. 333 28920 28920. 333 27472 27472. 333 27472 27472. 111 000	CW	(JPL-FNL)
M01a	3318	20-6-2013	Thu	1933	i.p. 45830 = 76059 10143 33461 54986 63140 89188 54026 ... = 45830 111 01987 35555 96795 27418 26728 111 000	CW	(JPL-FNL)
M01a	4812	26-6-2013	Wed	0950	i.p. 407 407 28 333 28163 28163 333 28163 28163 111 999 5 10 = 111 = 17071 111 000	CW	(JPL-FNL)
M01b	5938	20-6-2013	Thu	1505	159 15 12 30 379 30=79156	CW	(HFD)
M01b	5811.15	28-6-2013	Fri	1515	158 _31 _31 30 30 = = 61979 03874 01041 329_6 25076 ... 05505 11649 59129 56901 88377 = = 031? _31 30 30 000 //5812.3	CW	(MPJ)
M01b	5812.3	28-6-2013	Fri	1515	158 _31 _31 30 30 = = 61979 03874 01041 329_6 25076 ... 05505 11649 59129 56901 88377 = = 031? _31 30 30 000 //5811.15	CW	(MPJ)
M01c	10741	4-6-2013	Tue	0337	040 03 637 637 637 67 26 111 999 111 111 999 472 10 = 73614 81634 48453 38495 50164 37261 18365 48362 48306 37473 000 111 000	CW	(JPL-Sib)
M01c	6411	14-6-2013	Fri	1041	793 793 793 59447 59447 (Cont`d) 793 793 793 50449 50449 (Cont`d)	CW	(JPL-FNL)
M03	7836	19-6-2013	Wed	1118	650/00 = = 000	CW	(FMB)
M03	7837	20-6-2013	Thu	1320	437/00	CW	(ATC)
M03	7838	20-6-2013	Thu	1320	437/00 = = 000	CW	(JPL-FNL)
M03	6524	29-6-2013	Sat	1535	795/31 = = 92815 10202 47926 13641 17905 ... 23294 29570 87554 86667 86593 = = 795/31	CW	(MPJ)
M12	8116	4-6-2013	Tue	1850	124 1 6453 63 06679.....08443	CW	(ATC)
M12	9264	4-6-2013	Tue	1850	124 1 6453 63 06679.....08443	CW	(ATC)
M12	14964	5-6-2013	Wed	1500	555 1	CW	(HFD)
M12	13972	5-6-2013	Wed	1520	555 1	CW	(HFD)
M12	12164	5-6-2013	Wed	1540	555 1	CW	(HFD)
M12	9986	5-6-2013	Wed	2100	903 1	CW	(HFD)
M12	16269	5-6-2013	Wed	2110	263 1	CW	(HFD)
M12	9086	5-6-2013	Wed	2120	903 1	CW	(HFD)
M12	14669	5-6-2013	Wed	2130	263 1	CW	(HFD)
M12	14669	5-6-2013	Wed	2135	5FGs	CW	(MCO)
M12	7386	5-6-2013	Wed	2140	903 1	CW	(HFD)
M12	13369	5-6-2013	Wed	2150	263 1	CW	(HFD)
M12	6857	10-6-2013	Mon	0430	850 850 850 000	CW	(FN)
M12	7557	10-6-2013	Mon	0450	850 850 850 000	CW	(FN)
M12	14524	10-6-2013	Mon	1300	555 1	CW	(HFD)
M12	14524	10-6-2013	Mon	1300	555 1 7395 215 29441	CW	(FN)
M12	13524	10-6-2013	Mon	1320	555 1 7395 215 29441	CW	(FN)
M12	13524	10-6-2013	Mon	1320	555 1	CW	(HFD)
M12	11524	10-6-2013	Mon	1340	555 1	CW	(HFD)
M12	11524	10-6-2013	Mon	1340	555 1 7395 215 29441	CW	(FN)
M12	9176	10-6-2013	Mon	1700	257 1 3913 77 19673	CW	(FN)
M12	7931	10-6-2013	Mon	1720	257 1 3913 77 19673	CW	(FN)
M12	6904	10-6-2013	Mon	1740	257 1 3913 77 19673	CW	(FN)
M12	9176	10-6-2013	Mon	1800	257 1 2762 62 84545	CW	(FN)
M12	7931	10-6-2013	Mon	1820	257 1 2762 62 84545	CW	(FN)
M12	6904	10-6-2013	Mon	1840	257 1 2762 62 84545	CW	(FN)
M12	9176	10-6-2013	Mon	1900	257 1 1020 88 30123	CW	(FN)
M12	7931	10-6-2013	Mon	1920	257 1 1020 88 30123	CW	(FN)
M12	6904	10-6-2013	Mon	1940	257 1 1020 88 30123	CW	(FN)
M12	10343	11-6-2013	Tue	1830	124 1 3123 53 09691	CW	(FN)
M12	9264	11-6-2013	Tue	1850	124 1 3123 53 09691	CW	(FN)
M12	8116	11-6-2013	Tue	1910	124 1 3123 53 09691	CW	(FN)
M12	12164	12-6-2013	Wed	1540	555 1	CW	(FMB)
M12	11435	12-6-2013	Wed	1830	938 1 1186 69 31026	CW	(FN)
M12	10598	12-6-2013	Wed	1850	938 1 1186 69 31026	CW	(FN)
M12	9327	12-6-2013	Wed	1910	938 1 1186 69 31026	CW	(FN)
M12	9986	12-6-2013	Wed	2100	903 903 903 000	CW	(FN)
M12	16269	12-6-2013	Wed	2110	263 1 1900 119 06733	CW	(FN)

Enigma	Freq.	Date	Day	UTC	Remarks	Mode	Ctrb
M12	9086	12-6-2013	Wed	2120	903 903 903 000	CW	(FN)
M12	14669	12-6-2013	Wed	2130	263 1 1900 119 06733	CW	(FN)
M12	13369	12-6-2013	Wed	2150	263 1 1900 119 06733	CW	(FN)
M12	7984	13-6-2013	Thu	0630	911 911 911 000	CW	(FN)
M12	9184	13-6-2013	Thu	0650	911 911 911 000	CW	(FN)
M12	13503	13-6-2013	Thu	1310	834 1	CW	(HFD)
M12	13873	13-6-2013	Thu	1310	834 1	CW	(HFD)
M12	13873	13-6-2013	Thu	1310	834 1 3576 143 39599	CW	(FN)
M12	13373	13-6-2013	Thu	1330	834 1	CW	(HFD)
M12	13373	13-6-2013	Thu	1330	834 1 3576 143 39599	CW	(FN)
M12	11473	13-6-2013	Thu	1350	834 1 3576 143 39599	CW	(FN)
M12	10343	13-6-2013	Thu	1700	124 1 1187 70 36414	CW	(FN)
M12	9176	13-6-2013	Thu	1700	257 1 4310 91 88997	CW	(FN)
M12	9264	13-6-2013	Thu	1720	124 1 1187 70 36414	CW	(FN)
M12	7931	13-6-2013	Thu	1720	257 1 4310 91 88997	CW	(FN)
M12	8116	13-6-2013	Thu	1740	124 1 1187 70 36414	CW	(FN)
M12	6904	13-6-2013	Thu	1740	257 1 4310 91 88997	CW	(FN)
M12	10343	13-6-2013	Thu	1800	124 1 8664 99 55379	CW	(FN)
M12	9264	13-6-2013	Thu	1820	124 1 8664 99 55379	CW	(FN)
M12	8116	13-6-2013	Thu	1840	124 1 8664 99 55379	CW	(FN)
M12	9176	13-6-2013	Thu	1900	257 1 7630 68 98054	CW	(FN)
M12	7931	13-6-2013	Thu	1920	257 1 7630 68 98054	CW	(FN)
M12	6904	13-6-2013	Thu	1940	257 1 7630 68 98054	CW	(FN)
M12	13873	15-6-2013	Sat	1310	834 1 3576 143 39599	CW	(FN)
M12	13373	15-6-2013	Sat	1330	834 1 3576 143 39599	CW	(FN)
M12	11473	15-6-2013	Sat	1350	834 1 3576 143 39599	CW	(FN)
M12	16269	15-6-2013	Sat	2110	263 1 1900 119 06733	CW	(FN)
M12	14669	15-6-2013	Sat	2130	263 1 1900 119 06733	CW	(FN)
M12	13369	15-6-2013	Sat	2150	263 1 1900 119 06733	CW	(FN)
M12	14524	17-6-2013	Mon	1300	555 1 6018 141 57251	CW	(FN)
M12	14524	17-6-2013	Mon	1300	555 1 6018 141 57251 85249 62215 ... 38877 75894 57311 000 000	CW	(AB)
M12	13524	17-6-2013	Mon	1320	555 1 6018 141 57251 85249 62215 ... 38877 75894 57311 000 000	CW	(AB)
M12	13524	17-6-2013	Mon	1320	555 1 6018 141 57251	CW	(FN)
M12	11524	17-6-2013	Mon	1340	555 1 6018 141 57251 85249 62215 ... 38877 75894 57311 000 000	CW	(AB)
M12	11524	17-6-2013	Mon	1340	555 1 6018 141 57251	CW	(FN)
M12	11435	17-6-2013	Mon	1600	938 1 265 52 34095	CW	(FN)
M12	10598	17-6-2013	Mon	1620	938 1 265 52 34095	CW	(FN)
M12	9327	17-6-2013	Mon	1640	938 1 265 52 34095	CW	(FN)
M12	9176	17-6-2013	Mon	1700	257 1 4382 77 16521 42149 93512 ... 49664 86003 07231 000 000	CW	(AB)
M12	9176	17-6-2013	Mon	1700	257 1 4382 77 16521	CW	(FN)
M12	7931	17-6-2013	Mon	1720	257 1 4382 77 16521 42149 93512 ... 49664 86003 07231 000 000	CW	(AB)
M12	7931	17-6-2013	Mon	1720	257 1 4382 77 16521	CW	(FN)
M12	6904	17-6-2013	Mon	1740	257 1 4382 77 16521	CW	(FN)
M12	6904	17-6-2013	Mon	1740	257 1 4382 77 16521 42149 93512 ... 49664 86003 07231 000 000	CW	(AB)
M12	9176	17-6-2013	Mon	1800	257 1	CW	(HFD)
M12	9176	17-6-2013	Mon	1800	257 1 1642 64 09966	CW	(FN)
M12	7931	17-6-2013	Mon	1820	257 1	CW	(HFD)
M12	7931	17-6-2013	Mon	1820	257 1 1642 64 09966	CW	(FN)
M12	6904	17-6-2013	Mon	1840	257 1 1642 64 09966	CW	(FN)
M12	6904	17-6-2013	Mon	1840	257 1	CW	(HFD)
M12	9176	17-6-2013	Mon	1900	257 1	CW	(HFD)
M12	9176	17-6-2013	Mon	1900	257 1 2791 94 55939	CW	(FN)
M12	7931	17-6-2013	Mon	1920	257 1	CW	(HFD)
M12	7931	17-6-2013	Mon	1920	257 1 2791 94 55939	CW	(FN)
M12	6904	17-6-2013	Mon	1940	257 1 2791 94 55939	CW	(FN)
M12	6904	17-6-2013	Mon	1940	257 1	CW	(HFD)
M12	10343	18-6-2013	Tue	1830	124 1 1969 65 69158	CW	(FN)
M12	9264	18-6-2013	Tue	1850	124 1 1969 65 69158	CW	(FN)
M12	8116	18-6-2013	Tue	1910	124 1 1969 65 69158	CW	(FN)
M12	14964	19-6-2013	Wed	1500	555 1 6018 141 57251	CW	(FN)
M12	13972	19-6-2013	Wed	1520	555 1 6018 141 57251	CW	(FN)
M12	12164	19-6-2013	Wed	1540	555 1 6018 141 57251	CW	(FN)

Enigma	Freq.	Date	Day	UTC	Remarks	Mode	Ctrb
M12	8047	19-6-2013	Wed	1700	463 1 7313 95 57131	CW	(FN)
M12	6802	19-6-2013	Wed	1720	463 1 7313 95 57131	CW	(FN)
M12	5788	19-6-2013	Wed	1740	463 1 7313 95 57131	CW	(FN)
M12	11435	19-6-2013	Wed	1830	938 1 4853 54 44571	CW	(FN)
M12	10598	19-6-2013	Wed	1850	938 1 4853 54 44571	CW	(FN)
M12	9327	19-6-2013	Wed	1910	938 1 4853 54 44571	CW	(FN)
M12	9986	19-6-2013	Wed	2100	903 903 903 000	CW	(FN)
M12	16269	19-6-2013	Wed	2110	263 1 4662 85 46581	CW	(FN)
M12	9086	19-6-2013	Wed	2120	903 903 903 000	CW	(FN)
M12	14669	19-6-2013	Wed	2130	263 1 4662 85 46581	CW	(FN)
M12	13369	19-6-2013	Wed	2150	263 1 4662 85 46581	CW	(FN)
M12	7984	20-6-2013	Thu	0630	911 911 911 000	CW	(FN)
M12	9184	20-6-2013	Thu	0650	911 911 911 000	CW	(FN)
M12	13873	20-6-2013	Thu	1310	834 834 834 000	CW	(FN)
M12	13373	20-6-2013	Thu	1330	834 834 834 000	CW	(FN)
M12	9176	20-6-2013	Thu	1700	257 1 7596-	CW	(FN)
M12	10343	20-6-2013	Thu	1700	124 1 8932 71 56857	CW	(FN)
M12	7931	20-6-2013	Thu	1700	257 1 7596-	CW	(FN)
M12	9264	20-6-2013	Thu	1720	124 1 8932 71 56857	CW	(FN)
M12	6409	20-6-2013	Thu	1740	257 1 7596-	CW	(FN)
M12	8116	20-6-2013	Thu	1740	124 1 8932 71 56857	CW	(FN)
M12	10343	20-6-2013	Thu	1800	124 1 2983 87 31132	CW	(FN)
M12	9264	20-6-2013	Thu	1820	124 1 2983 87 31132	CW	(FN)
M12	8116	20-6-2013	Thu	1840	124 1 2983 87 31132	CW	(FN)
M12	9176	20-6-2013	Thu	1900	257 1 7652 62 54668	CW	(FN)
M12	7931	20-6-2013	Thu	1920	257 1 7652 62 54668	CW	(FN)
M12	6409	20-6-2013	Thu	1940	257 1 7652 62 54668	CW	(FN)
M12	13873	22-6-2013	Sat	1310	834 834 834 000	CW	(FN)
M12	13373	22-6-2013	Sat	1330	834 834 834 000	CW	(FN)
M12	16269	22-6-2013	Sat	2110	263 1 4662 85 46581	CW	(FN)
M12	14669	22-6-2013	Sat	2130	263 1 4662 85 46581	CW	(FN)
M12	13369	22-6-2013	Sat	2150	263 1 4662 85 46581	CW	(FN)
M12	6857	24-6-2013	Mon	0430	850 850 850 000	CW	(FN)
M12	7557	24-6-2013	Mon	0450	850 850 850 000	CW	(FN)
M12	14524	24-6-2013	Mon	1300	555 1 6429 187 28209	CW	(FN)
M12	13524	24-6-2013	Mon	1320	555 1 6429 187 28209	CW	(FN)
M12	11524	24-6-2013	Mon	1340	555 1 6429 187 28209	CW	(FN)
M12	11434	24-6-2013	Mon	1600	938 1	CW	(FMB)
M12	11435	24-6-2013	Mon	1600	938 1 8957 105 73977	CW	(FN)
M12	10598	24-6-2013	Mon	1620	938 1 8957 105 73977	CW	(FN)
M12	9327	24-6-2013	Mon	1640	938 1 8957 105 73977	CW	(FN)
M12	9176	24-6-2013	Mon	1700	257 1 4621 72 34288	CW	(FN)
M12	7931	24-6-2013	Mon	1720	257 1 4621 72 34288	CW	(FN)
M12	6904	24-6-2013	Mon	1740	257 1 4621 72 34288	CW	(FN)
M12	9176	24-6-2013	Mon	1800	257 1 2180 60 35282	CW	(FN)
M12	7931	24-6-2013	Mon	1820	257 1 2180 60 35282	CW	(FN)
M12	6904	24-6-2013	Mon	1840	257 1 2180 60 35282	CW	(FN)
M12	14964	26-6-2013	Wed	1500	555 1 6429 187 28209	CW	(FN)
M12	13972	26-6-2013	Wed	1520	555 1 6429 187 28209	CW	(FN)
M12	12164	26-6-2013	Wed	1540	555 1 6429 187 28209	CW	(FN)
M12	8047	26-6-2013	Wed	1700	463 1 6263 91 97230	CW	(FN)
M12	6802	26-6-2013	Wed	1720	463 1 6263 91 97230	CW	(FN)
M12	5788	26-6-2013	Wed	1740	463 1 6263 91 97230	CW	(FN)
M12	11435	26-6-2013	Wed	1830	938 1 8995 57 32286	CW	(FN)
M12	10598	26-6-2013	Wed	1850	938 1 8995 57 32286	CW	(FN)
M12	9327	26-6-2013	Wed	1910	938 1 8995 57 32286	CW	(FN)
M12	9986	26-6-2013	Wed	2100	903 1 2284 63 35184	CW	(FN)
M12	16269	26-6-2013	Wed	2110	263 1 7393 103 21491	CW	(FN)
M12	9086	26-6-2013	Wed	2120	903 1 2284 63 35184	CW	(FN)
M12	14669	26-6-2013	Wed	2130	263 1 7393 103 21491	CW	(FN)
M12	13369	26-6-2013	Wed	2150	263 1 7393 103 21491	CW	(FN)
M12	13873	27-6-2013	Thu	1310	834 834 834 000	CW	(FN)

Enigma	Freq.	Date	Day	UTC	Remarks	Mode	Ctrb
M12	13373	27-6-2013	Thu	1330	834 834 834 000	CW	(FN)
M12	13386	27-6-2013	Thu	1600	725 1	CW	(FMB)
M12	10343	27-6-2013	Thu	1700	124 1 8182 71 58011	CW	(FN)
M12	9176	27-6-2013	Thu	1700	257 1 8307 99 59881	CW	(FN)
M12	7931	27-6-2013	Thu	1720	257 1 8307 99 59881	CW	(FN)
M12	9264	27-6-2013	Thu	1720	124 1 8182 71 58011	CW	(FN)
M12	8116	27-6-2013	Thu	1740	124 1 8182 71 58011	CW	(FN)
M12	6904	27-6-2013	Thu	1740	257 1 8307 99 59881	CW	(FN)
M12	10343	27-6-2013	Thu	1800	124 1 2951 85 43422	CW	(FN)
M12	9264	27-6-2013	Thu	1820	124 1 2951 85 43422	CW	(FN)
M12	8116	27-6-2013	Thu	1840	124 1 2951 85 43422	CW	(FN)
M12	9176	27-6-2013	Thu	1900	257 1 8174 1 70 39916	CW	(FN)
M12	7931	27-6-2013	Thu	1920	257 1 8174 1 70 39916	CW	(FN)
M12	6904	27-6-2013	Thu	1940	257 1 8174 1 70 39916	CW	(FN)
M12	13873	29-6-2013	Sat	1310	834 834 834 000	CW	(MPJ)
M14	9085	11-6-2013	Tue	0700	576 0	CW	(HFD)
M14	10755	11-6-2013	Tue	1811	975 368 368 52 52 06182 49734 16549 5493 89600 (groups twice)... 49784 92029 = = 368 368 52 52 00000	CW	(MPJ/JPL)
M14	6856	11-6-2013	Tue	1820	809 809 15 15 = = 87463 11008 73829 46376 40092 38746 19134 09134 72210 97635 87246 29984 11198 77333 46789 = = 809 809 15 15 00000	CW	(AnEur)
M14	10755	11-6-2013	Tue	1820	i.p. 49784 92029 = = 368 368 52 52 00000	CW	(JPL-RUS)
M18	4503	5-6-2013	Wed	1142	0254 0255	CW	(JPL-Sib)
M18	4407	9-6-2013	Sun	1816	2217 2218	CW	(JPL-Sib)
M18	4503	11-6-2013	Tue	1940	0140 0140 0140 ...	CW	(FN)
M21	10394	11-6-2013	Tue	1814	=99?2214?9????? =99?2216?9?????	CW	(JPL-Sib)
M21	6422	14-6-2013	Fri	1034	=991435?8????? 11880541325434 =991436?8????? 11880541722236 //5356 kHz	CW	(JPL-FNL)
M21	5356	14-6-2013	Fri	1034	=991435?8????? 11880541325434 =991436?8????? 11880541722236 //6422 kHz	CW	(JPL-FNL)
M21	5221	15-6-2013	Sat	1957	Russian Air Defence	CW áá ááá	(LG2)
M21	9368	20-6-2013	Thu	1100	PVO =11872545384258 =2187290101??3 =991509?8????? =118785.162570 =2.8781.99 =99152?8?????	CW	(JPL-FNL)
M21	6422	20-6-2013	Thu	1418	PVO =21881901020508 =991819?8?????	CW	(JPL-FNL)
M21	6379	20-6-2013	Thu	2218	4XZ Haifa vvv de 4XZ	CW	(SW2)
M21	5356	26-6-2013	Wed	2104	PVO =990104?8?????	CW	(AB)
M21	5221.5	30-6-2013	Sun	1938	Russian Military =992338??0????? //3246.5	CW	(MPJ)
M21	3246.5	30-6-2013	Sun	1938	Russian Military =992338??0????? //5221.5	CW	(MPJ)
M22	4595	13-6-2013	Thu	0021	VVV DE 4XZ BT BT then into 5LGs	CW	(LG2)
M22	4331	15-6-2013	Sat	1851	VVV DE 4XZ	CW	(AB)
M22	4331	26-6-2013	Wed	1940	VVV DE 4XZ	CW	(AB)
M23	5768	6-6-2013	Thu	1908	999 repeated	CW	(JPL-Sib)
M23	5768	6-6-2013	Thu	1908	999 repeated	CW	(JPL-Sib)
M24	10755	11-6-2013	Tue	1810	975 368 52 = = 06182...	CW	(FMB)
M24	10755	13-6-2013	Thu	1731	ip	CW	(FMB)
M24	8116	13-6-2013	Thu	1743	ip	CW	(FMB)
M24	9941	17-6-2013	Mon	1907	343 801 92 = = 96763...	CW	(FMB)
M24	8098	17-6-2013	Mon	1930	343 (rpt 1900 UTC 9941 kHz)	CW	(FMB)
M24	10755	22-6-2013	Sat	1454	(ip) = = 183 183 46 46 865 (R3) 204 204 8 8 = = 74899 ... = = 204 204 865(R1) ==	CW	(FMB)
M24	9463	26-6-2013	Wed	0500	t58 (R 5)	CW	(FMB)
M32	3816	1-6-2013	Sat	2200	XL4E: Russian Mil. Comms check in progress with at least 1XWM GGKK 5C7D VJRP DJTA AINK A3TL & V15P called. All respond on freq except VJRP & V15P. Simplex net.	CW	(MPJ)
M32	14842	2-6-2013	Sun	1236	XXX XXX WEGI WEGI 83057 OBREChETKA 8606 1621	CW	(JU)
M32	12832	2-6-2013	Sun	1243	u u u XXX XXX WEGI WEGI 83057 OBREChETKA 8606 1621	CW	(JU)
M32	13396	5-6-2013	Wed	0650	Russian Mil. BYGR 193 21 5 1048 193 = 5FGs message ZJSV DE BYGR RK. E1E6 DE BYGR RK	CW	(TR2)
M32	13396	5-6-2013	Wed	1052	Russian Mil. ZJSV DE BYGR RK. E1E6 DE BYGR RK	CW	(TR2)
M32	13396	5-6-2013	Wed	1333	Russian Mil. XXX XXX WEGI 30 967 BRISNYJ 9352 4382	CW	(TR2)
M32	13396	5-6-2013	Wed	1354	Russian Mil. ZJSV DE BYGR RK. E1E6 DE BYGR RK	CW	(TR2)
M32	13396	5-6-2013	Wed	1431	Russian Mil. KPIZ R 009	CW	(TR2)
M32	13396	7-6-2013	Fri	1053	Russian Mil. E1E6 DE BYGR. BYGR QRV. 6 K RPT AA5 (frm BYGR, short c/s for E1E6)	CW	(TR2)

Enigma	Freq.	Date	Day	UTC	Remarks	Mode	Ctrb
M32	11238	10-6-2013	Mon	1253	DE 7JTM. 6KE5 K. R QSL ? K (see N&O 189)	CW	(JPL)
M32	3215.5	13-6-2013	Thu	0014	DE CIXB CIXB QTC ZK ? Then encrypted text	CW	(LG2)
M32	13396	13-6-2013	Thu	0711	Russian Mil. XXX XXX WEGI WEGI 65720 OBVENOK 7930 0383 (see N&O 189)	CW	(TR2)
M32	13396	14-6-2013	Fri	0912	PLOX QTC ZWH AR. SKTC 065 16 14 1305 065 = ZWH 132?5 PPPPP V?IChR ÍGME– AGRM– FRXIR (see N&O 189)	CW	(TR2)
M32	7280	14-6-2013	Fri	1012	Z11L DE 4BSH K. SCSS DE 4BSH K. V9L2 DE 4BSH K	CW	(JPL-FNL)
M32	6505	14-6-2013	Fri	1029	315 09472 20056 60038 71752 46929 72553 5..37 83168 06416 .0821 etc	CW	(JPL-FNL)
M32	18.1	14-6-2013	Fri	1829	i.p. RDL: Russian Military Strat Bcast. Msg ending ... 05044 85344 05044 K.	CW	(JPL-FNL)
M32	18.1	14-6-2013	Fri	1840	i.p. RDL: Russian Military Strat Bcast. Many T-600 msgs followed by Morse "RDL 48824 39138 48824 39138 48824 39138 K	CW	(JPL-FNL)
M32	18.1	14-6-2013	Fri	1855	i.p. 53478 86837 67394 82218 90192 ... 26399 20107 94042 K. RDL RDL RDL 11111 81782 41091 11469 11469 73447 25183 79119 53242 ... 59921 14084 K //6329 kHz	CW	(JPL-FNL)
M32	6329	14-6-2013	Fri	1855	i.p. 53478 86837 67394 82218 90192 ... 26399 20107 94042 K. RDL RDL RDL 11111 81782 41091 11469 11469 73447 25183 79119 53242 ... 59921 14084 K //18.1 kHz	CW	(JPL-FNL)
M32	10144	15-6-2013	Sat	1927	Tent. Russian Mil. Hand sent. MSPR MSPR MSPR 720 60 15 2320 720 = ZNT 721 = 36517 59062 81537 38295 75114 89594 78653 60606 07349 15056 721 RPT AL QLN AR	CW	(JPL-RUS)
M32	13396	17-6-2013	Mon	0858	NZF8 DE GFOJ QBE QYT6. QYT9 K. GFOJ R. 7B7C DE SKTC RK	CW	(TR2)
M32	6248	17-6-2013	Mon	1045	LSFP DE AGWN K. ZZ4Q DE AGWN R K	CW	(JPL-FNL)
M32	10200	18-6-2013	Tue	1530	Russian Mil. UAW7 AR	CW	(JPL-FNL)
M32	6343	18-6-2013	Tue	1637	Russian Mil. 75281 87215 70462 2893. 60315 15284 08571 65738 82145 26359 (Cont&Ed) K	CW	(JPL-FNL)
M32	4711	18-6-2013	Tue	1650	Russian Mil. GWN2 DE HKLE QSA ? K	CW	(JPL-FNL)
M32	13396	20-6-2013	Thu	0908	NZF8 DE SKTC RK. 7B7C DE SKTC RK (see N&O 189)	CW	(TR2)
M32	10874	20-6-2013	Thu	1050	7CVS DE X7P7 K. SO8B DE X7P7 K. 1QGU DE X7P7 K R. KSO8B DE X7P7 K7CV5 DE X7P7 K R. KSOB EEEER K	CW	(JPL-FNL)
M32	7876	20-6-2013	Thu	1318	SJTF DE CNBY	CW	(JPL-FNL)
M32	7741	20-6-2013	Thu	1421	9DJ5 DE LT7H K	CW	(JPL-FNL)
M32	13396	21-6-2013	Fri	1018	FFZW DE QTAR RK. TOFE DE QTAR RK	CW	(TR2)
M32	13396	21-6-2013	Fri	1101	FFZW DE 9ENM QBE QYT9. QTAR QRV. QTAR R 645	CW	(TR2)
M32	13396	21-6-2013	Fri	1245	FFZW DE QTAR RK. TOFE DE QTAR RK	CW	(TR2)
M32	13396	21-6-2013	Fri	1507	7TF7 QRV. 7TF7 R 912	CW	(TR2)
M32	10964	26-6-2013	Wed	0941	IWP5 ZEZ ZJK ZCD QYT4 K. R K	CW	(JPL-FNL)
M32	10962	26-6-2013	Wed	1915	5PBG de S1PV R T77 ? K. PP5J DE S1PV R 077 ? K	CW	(JPL-Sib)
M32	5836	30-6-2013	Sun	1755	Test tones, "VV", test tone, "V" for 2 mins and at 1805 UTC "V" for 1 min.	CW	(TR2)
M32	5596	30-6-2013	Sun	1928	MCLM: Russian Mil. Exchanges QSAs with at least 7CFF, ELTO & GNYZ. Duplex net.	CW	(MPJ)
M32a	8345	3-6-2013	Mon	1815	Russian Navy AO Lena. rcv de rko81 976 20 3 2200 976 = for rh45 rjd38 rje73 = 03181 99352 10354 41597 32208 10250 40066 52007 70300 83500 22242 00250 29903 399// 88000 80000 03016 = + rko81 k	CW	(WP3)
M32a	12464	3-6-2013	Mon	1820	Russian Navy. rit de rji63 127 17 3 2215 127 = sml for rjh45 rjh74 = 03181 99370 70105 41998 03608 10200 40132 57014 70200 80000 22200 00150 20503 303// 02013 = + rji63 k	CW	(WP3)
M32a	10814	4-6-2013	Tue	0412	DE RAL2 K (see N&O 189)	CW	(JPL-Sib)
M32a	12464	4-6-2013	Tue	1820	Russian Navy. RJI63 sends 5fg message	CW	(TR2)
M32a	8345	4-6-2013	Tue	2230	Russian Navy. RCV DE RHL80 (see N&O 189)	CW	(TR2)
M32a	8345	5-6-2013	Wed	0003	Russian Navy. RCV DE RHL80 (see N&O 189)	CW	(TR2)
M32a	8345	7-6-2013	Fri	0005	Russian Navy. VVV RCV DE RKO81 QSA? QTC (see N&O 189)	CW	(TR2)
M32a	7566	9-6-2013	Sun	1758	Russian Navy. RKO81 de RCV QSA 2 K	CW	(JPL-Sib)
M32a	8345	11-6-2013	Tue	0611	Russian Navy. rcv de rbiz 351 17 11 1000 351 = for rje73 rjh45 = 11061 99349 10358 41598 52305 10236 40114 51000 70202 85200 22200 10340 20000 88000 11014 = + rbiz k	CW	(WP3)
M32a	8345	11-6-2013	Tue	0612	Russian Navy AO Lena. rcv de rko81 983 20 11 1000 983 = for rh45 rjd38 rje73 = 11061 99356 10312 41998 02203 10250 40086 52010 70200 80000 22262 00150 ... 325// 88000 80000 11016 = +rko81 k	CW	(WP3)
M32a	5224	13-6-2013	Thu	0005	RCV: Russian Navy Sevastapol wkg RFE70	CW	(LG2)
M32a	11114.7	13-6-2013	Thu	0704	Russian Navy5Fgs ending 4434843538 81599 88343 k	CW	(LG2)
M32a	9145	13-6-2013	Thu	0737	Russian Navy. DE RIW RIW K	CW	(LG2)
M32a	8345	13-6-2013	Thu	1802	Russian Navy. rcv de rbiz 754 17 13 2200 754 = for rje73 rjh45 = 13181 99349 10358 41598 42705 10245 40099 52004 70300 84300 22200	CW	(WP3)

Enigma	Freq.	Date	Day	UTC	Remarks	Mode	Ctrlb
					10240 20000 88000 13014 = + rbiz k		
M32a	8345	13-6-2013	Thu	1802	Russian Navy AO Lena. rcv de rko81 451 20 13 2200 451 = for rh45 rjd38 rje73 = 13181 99349 10215 41698 23007 10225 40092 54000 70200 82200 22262 00220 29903 333// 88000 80000 13016 = + rko81 k	CW	(WP3)
M32a	11000	13-6-2013	Thu	2228	Russian Navy. RGV82 IIII VVV RGV82 RGV82 RGV82 DE RIW RIW QSA? K CW		(LG2)
M32a	6802	14-6-2013	Fri	1021	RFV99 DE RMP QRR 3 QDW 5456 AR	CW	(JPL-FNL)
M32a	11000	15-6-2013	Sat	0737	Russian Navy HQ Moscow. RLA88 RLA88 RLA88 DE RIW RIW QSA?K	CW	(LG2)
M32a	3852	15-6-2013	Sat	2348	RCV DE RFE70 K. RFE70 DE RCV K. RFE70 QYT 5 QCM K. RCV QYT 4 QCM K. RFE70 R	CW	(JPL-RUS)
M32a	11000	16-6-2013	Sun	0208	RLA88 DE RIW QSA ? K	CW	(JPL-RUS)
M32a	8345	17-6-2013	Mon	0011	VVV RCV DE RBIZ QSA? QTC. RBIZ 134 17 17 0400 134 = FOR RJE73 RJH45 = 17001 99349 10358 22200 etc	CW	(TR2)
M32a	8816	17-6-2013	Mon	0445	Russian Naval Air Transport. rcb rjf94 de 26002 qto 0430 qrd XLMV XMKK qah 5800 qbd 0500 k qth 5820 2040 qtr 0535 qah 5800 qbd 0400 k - qth 5945 2427 qtr 0620 qah 5800 qal XLLV 0705 qbd 0300 k - qqm XLLV 0708 sk	CW	(WP3)
M32a	8816	17-6-2013	Mon	0844	Russian Naval Air Transport. rjf94 rjc38 de 52851 qto 0820 qrd XLLV XLMV qbd 5000 qre 1130 k - qql ULPE 0925 qbg 6700 k - qth 6112 3223 qtr 1035 qre XLLV 1135 k - qqm XLLV 1139 sk	CW	(WP3)
M32a	8816	17-6-2013	Mon	0909	Russian Naval Air Transport. rcb rjf94 de 26002 qto 0904 qrd XUOW XLLV qah 5800 qbd 0500 k - qay UUWR 1010 qah 5800 qbd 0400 k - qay UUWR 1010 qah 5800 qbd 0400 k - qay UUBT 1120 qah 5800 qal XUOW 1220 qbd 0300 k	CW	(WP3)
M32a	10543	17-6-2013	Mon	1030	RHY47 DE RCV QSA ? K. VVV RHY47 DE RCV QSA ? K	CW	(JPL-FNL)
M32a	10243	17-6-2013	Mon	1032	Russian Navy. i.p. 32835 90460 71006 100072 875XX 916XX 16140 42656 .8240 80902 10069 71022 76162 802X 905XX 26140 23744 55760 52803 10210 .2101 950XX 16023 K. SGPM = 905XX K	CW	(JPL-FNL)
M32a	8816	17-6-2013	Mon	1335	Russian Naval Air Transport. rjf94 rjc38 de 52851 qto 1315 qrd XLMV XLLV qbd 5400 qre 1610 k - qql ULPE 1440 qbg 7600 k - qql XLMF 1535 qre XLMV 1610 k - qqm XLMV 1609 sk	CW	(WP3)
M32a	8345	17-6-2013	Mon	1803	Russian Navy AO Lena. rcv de rko81 675 20 17 2200 675 = for rjh45 rjd38 rje73 = 17181 99366 10136 41998 02601 10270 40146 57010 70200 80000 22272 00220 20000 332// 88000 80000 17016 = + rko81 k	CW	(WP3)
M32a	8345	17-6-2013	Mon	1804	RKO81 675 20 17 2200 675 = FOR RJH45 RJD38 RJE73 = 17181 99366 10136 22272	CW	(TR2)
M32a	8345	17-6-2013	Mon	1805	Russian Navy PM-138. rcv de rbiz 282 17 17 2200 282 = for rje73 rjh45 = CW 17181 99349 10358 41598 62306 10238 40078 57004 70202 86300 22200 10245 20000 88000 17014 = + rbiz k		(WP3)
M32a	8345	18-6-2013	Tue	0840	Russian Navy. rit de rji51 745 18 18 1202 745 = sml for rjh45 rrjd38 rif4 = 18121 99560 10200 41598 62303 10130 40178 53018 70222 86531 22242 00140 20201 18013 = + rji51 k	CW	(WP3)
M32a	8345	19-6-2013	Wed	0840	Russian Navy AO Lena. rcv de rko81 363 20 19 1000 363 = for rjh45 rjd38 rje73 = 19061 99375 10073 41998 02303 10210 40132 52010 70200 80000 22262 00210 20000 327// 88000 80000 19016 = + rko81 k	CW	(WP3)
M32a	8345	19-6-2013	Wed	0840	Russian Navy PM-138. rcv de rbiz 954 17 19 1000 954 = for rje73 rjh45 = CW 19061 99349 10358 41598 20000 10249 40049 57009 70100 82100 22200 10250 20000 88000 = + rbiz k		(WP3)
M32a	8345	21-6-2013	Fri	0007	Russian Navy. VVV RCV DE RKO81 QSA? QTC (see N&O 189)	CW	(TR2)
M32a	8345	21-6-2013	Fri	0602	RKO81: Russian Navy AO Lena RUS 0602 CW rcv de rko81 463 20 21 1000 463 = for rjh45 rjd38 rje73 = 21061 99366 70010 41698 20002 10220 40159 54000 70200 82410 22252 00205 20000 399// 88000 80000 21016 = + rko81 k	CW	(WP3)
M32a	8345	21-6-2013	Fri	0606	RBIZ: Russian Navy PM-138 RUS 0606 CW rcv de rbiz 757 17 21 1000 757 = for rje73 rjh45 = 21061 99349 10358 41598 21803 10359 40080 57015 70200 88010 22200 10250 20000 88000 21014 = + rbiz k	CW	(WP3)
M32a	8345	21-6-2013	Fri	0609	RKB91: Russian Navy unid RUS 0609 CW rit de rkb91 - rmp de rkb91 736 16 21 1000 736 = sml for rjh45 rjd38 = 21061 99571 10701 41597 62503 10150 41008 51020 70202 8//// 22252 00170 21012 = + rkb91 k	CW	(WP3)
M32a	8816	21-6-2013	Fri	0610	26002: Russian Naval Air Transport. rcb rjf94 de 26002 qto 0552 qrd XMKK XLLV qah 5500 qbd 0500 k - qth 5933 2310 qtr 0650 qah 5500 qbd 0400 k - qth 5700 1955 qtr 0740 qah 5500 qal XMKK 0825 qbd 0300 k - qqm XMKK 0830 sk	CW	(WP3)
M32a	8816	21-6-2013	Fri	0615	52851: Russian Naval Air Transport. rjf94 rjc38 de 52851 qto 0600 qrd XLLV XUMO qbd 0800 qah 4200 k - qth 5809 3421 qtr 0715 qre XLLV 0820 k - qqm XLLV 0810 sk	CW	(WP3)
M32a	8816	21-6-2013	Fri	1010	52851: Russian Naval Air Transport. rjf94 rjc38 de 52851 qto 1000 qrd XLMV XLLV qbd 5400 qre 1300 k - qth 6248 3251 qtr 1108 qbg 5800 k - qqm XLMV1258 sk	CW	(WP3)
M32a	8345	21-6-2013	Fri	1802	RKB91: Russian Navy Vessel. RMP DE RKB91 784 16 21 2200 784 = SML	CW	(Tom)

Enigma	Freq.	Date	Day	UTC	Remarks	Mode	Ctrb
					FOR RJH45 RJD38 = 21181 99552 10057 41193 82310 10160 40005 57027 72106 8//// 22252 00160 21012 = + RKB91		
M32a	8345	22-6-2013	Sat	0004	Russian Navy. VVV RCV DE RKO81 QSA? QTC. RKO81 913 20 22 0400 913 = FOR RJH45 RJD38 RJE73 = 22001 99354 70042 22252	CW	(TR2)
M32a	8345	22-6-2013	Sat	0052	Russian Navy. VVV RCV DE RBIZ QSA? QTC. RBIZ 139 17 22 0400 139 = FOR RJE73 RJH45 = 22001 99349 10358 22200	CW	(TR2)
M32a	8345	22-6-2013	Sat	0256	Russian Navy. RCV DE RHI99 QYT4 QSX 10984	CW	(TR2)
M32a	8345	22-6-2013	Sat	0603	Russian Navy. RMP DE RKB91 QSA? QTC. RKB91 343 16 22 1000 343 = SML FOR RJH45 RJD38 = 22061 99537 10036 222?? (stepped on by RKO81)	CW	(TR2)
M32a	12464	22-6-2013	Sat	1212	Russian Navy. VVV RCV DE RKO81 QSA? QTC. RKO81 322 20 22 1600 322 = FOR RJH45 RJD38 RJE73 = 22121 99354 70043 22200	CW	(TR2)
M32a	12464	22-6-2013	Sat	1323	Russian Navy. RMP DE RKB91. RMP DE RKB91 QSA1 /NO AS 10	CW	(TR2)
M32a	12464	22-6-2013	Sat	1404	Russian Navy. RIW DE RKB91 QSA? QTC	CW	(TR2)
M32a	12464	22-6-2013	Sat	1406	Russian Navy. RKB91 616 24 22 1801 616 = SML FOR RIW RMP = 11111 93187 02961 79178 37335 90904 28040 22149 64065 36868 86831 95379 15268 34396 22722 47522 52296 78165 33531 71527 22020 = AR RKB91	CW	(TR2)
M32a	8345	22-6-2013	Sat	1809	Russian Navy. RBIZ 656 ?7 22 2200 656 = RJE73 RJH45 = 22???? 99349 10358 22200	CW	(TR2)
M32a	8345	22-6-2013	Sat	1812	Russian Navy. VVV RMP DE RKB91 QSA? QTC. RKB91 935 ?5 22 2200 935 = FOR RJH45 RJD38 = 22181 99524 10028 22252	CW	(TR2)
M32a	8345	23-6-2013	Sun	0009	Russian Navy. RBIZ 23001 99349 10358 22200	CW	(TR2)
M32a	8345	23-6-2013	Sun	0011	Russian Navy. VVV RCV DE RKO81 QSA? QTC. RKO81 358 20 23 0400 358 = FOR RJH45 RJD38 RJE73 = 23001 99354 70043 22200	CW	(TR2)
M32a	8345	23-6-2013	Sun	0609	Russian Navy. RMP DE RKB91 QSA? QTC. RMP DE RKB91 QSA? QTC. RMP DE RKB91 QSA1 QRV. RMP DE RKB91 AR 344 RPT 50	CW	(TR2)
M32a	8345	25-6-2013	Tue	0004	Russian Navy. VVV RCV DE RKO81 QSA QTC? RKO81 725 20 25 0400 725 = FOR RJH45 RJD38 RJE73 = 25001 99360 70045 22272. VVV RCV DE RBIZ QSA? QTC. RBIZ 479 17 25 0400 479 = FOR RJE73 RJH45 = 25001 99349 10358 22200	CW	(TR2)
M32a	12464	25-6-2013	Tue	0602	RKO81: Russian Navy AO Lena. rcv de rko81 990 20 24 1000 990 = for rjh45 rjd38 rje73 = 24061 99354 70043 41698 11105 10200 40166 54000 70200 81600 22200 00200 29901 310// 88000 80000 24016 = + rko81 k	CW	(WP3)
M32a	8345	25-6-2013	Tue	0607	RBIZ: Russian Navy PM-138. rcv de rbiz 402 17 24 1000 402 = for rje73 rjh45 = 24061 99348 10358 41598 40905 10257 40080 58020 70200 84210 22200 10258 20000 88000 24014 = + rbiz k	CW	(WP3)
M32a	8345	25-6-2013	Tue	0609	RKB91: Russian Navy. rmp de rkb91 152 16 24 1000 152 = sml for rjh45 rjd38 = 24061 99504 70030 41897 22707 10160 40226 52002 70200 8//// 22200 00160 24012 = + rkb91 k	CW	(WP3)
M32a	8345	25-6-2013	Tue	0730	Russian Navy. RMP DE RFK99 QYT4 QSA? RMP DE RFK99 RPT. RMP DE RFK99 OK AS3. RMP DE RFK99	CW	(TR2)
M32a	6832	25-6-2013	Tue	0952	RMP: Russian Navy Kaliningrad. rfk99 rfk99 rfk99 de rmp rmp qsu1 qsx __ 1612z reo de rmp	CW	(WP3)
M32a	7567	25-6-2013	Tue	1754	Russian Navy. RHI99 DE RCV QSA ? K	CW	(JPL-FNL)
M32a	8345	25-6-2013	Tue	1802	RKO81: Russian Navy AO Lena. rcv de rko81 678 20 24 2200 678 = for rjh45 rjd38 rje73 = 24181 99354 70043 41998 00808 10240 40166 54000 70200 80000 22200 00200 29902 399// 88000 80000 24016 = + rko81 k	CW	(WP3)
M32a	8345	25-6-2013	Tue	1806	RBIZ: Russian Navy PM-138. rcv de rbiz 985 17 24 2200 985 = for rje73 rjh45 = 24181 99349 10358 41598 42703 10252 40099 52007 70200 84210 22200 10258 20000 88000 24014 = + rbiz k	CW	(WP3)
M32a	12464	25-6-2013	Tue	1816	RKB91: Russian Navy AO Kola. riw de rkb91 210 16 24 2200 210 = sml = 24181 99503 70030 41898 60705 10200 40260 52045 70202 8//// 22252 00160 24012 = + rkb91 k	CW	(WP3)
M32a	8345	26-6-2013	Wed	0008	Russian Navy. VVV RCV DE RBIZ QSA? QTC. RBIZ 117 17 26 0400 117 = FOR RJE73 RJH45 = 26001 99349 10358 22200	CW	(TR2)
M32a	8345	26-6-2013	Wed	0013	Russian Navy. VVV RIT DE RKB91 QSA? QTC. RKB91 412 16 26 0401 412 = SML FOR RJH45 RJH74 = 26001 99464 70079 22252. RKB91 QSL 442	CW	(TR2)
M32a	8345	26-6-2013	Wed	0202	Russian Navy. VVV RIT DE RKB91 QSA? QTC. RKB91 ?14 37 26 0601 ?14 = SML FOR RIT RMP RIW = 11111 11803 (continues 5fg message)	CW	(TR2)
M32a	12464	27-6-2013	Thu	0004	Russian Navy. VVV RIT DE RKB91 QSA? QTC. RKB91 482 16 27 0401 482 = SML FOR RJH45 RJH74 = 27001 99425 70103 22242	CW	(TR2)
M32a	12464	27-6-2013	Thu	0016	Russian Navy. VVV RCV DE RBIZ QSA? QTC	CW	(TR2)
M32a	12464	27-6-2013	Thu	0018	Russian Navy. RBIZ 231 17 27 0400 231 = FOR RJE73 RJH45 = 27001 99349 10358 22200	CW	(TR2)
M32a	12464	27-6-2013	Thu	0202	Russian Navy. VVV RIT DE RKB91 QSA? QTC	CW	(TR2)

Enigma	Freq.	Date	Day	UTC	Remarks	Mode	Ctrb
M32a	12464	27-6-2013	Thu	0203	Russian Navy. RKB91 905 37 27 0601 905 = SML FOR RIW = 11111 38006 67052 ... 80761 27032 = AR RKB91	CW	(TR2)
M32a	12464	27-6-2013	Thu	1208	Russian Navy. VVV RIW DE RKB91 QSA? QTC. VVV RMP DE RKB91 QSA? QTC	CW	(TR2)
M32a	12464	27-6-2013	Thu	1216	Russian Navy. RKB91 580 18 27 1601 580 = SML FOR RJH45 RJH74 RJD38 = 27121 99405 70102 22242	CW	(TR2)
M32a	12464	27-6-2013	Thu	1401	Russian Navy. VVV RMP DE RKB91 QSA? QTC	CW	(TR2)
M32a	12464	27-6-2013	Thu	1402	Russian Navy. RKB91 206 25 27 1801 206 = SML FOR RIT RMP RIW = 11111 26229 24244 ... 90217 98687 27020 = AR RKB91	CW	(TR2)
M32a	12464	27-6-2013	Thu	1542	Russian Navy. RIW DE RKB91 QSA2 QRV. RKB91 R 745 RPT 26 33. RKB91 QSL 745	CW	(TR2)
M32a	12464	28-6-2013	Fri	0603	RKB91: Russian Navy AO Kola. riw de rkb91 139 16 28 1000 139 = sml for rjh45 rjh74 = 28061 99373 70098 41897 10103 10180 40210 51010 70202 8//// 22232 00180 28012 = + rkb91 k	CW	(WP3)
M32a	8345	28-6-2013	Fri	0610	RBIZ: Russian Navy PM-138. rcv de rbiz 677 17 28 1000 677 = for rje73 rjh45 = 28061 99349 10358 41598 32303 10264 40081 57020 70100 83100 22200 10265 20000 88000 28014 = + rbiz k	CW	(WP3)
M32a	8345	30-6-2013	Sun	0009	Russian Navy. VVV RIW DE RKB91 QSA? QTC. RKB91 376 16 30 0401 376 = SML FOR RJH45 RJE73 = 30001 99362 70024 22222	CW	(TR2)
M32a	8345	30-6-2013	Sun	0202	Russian Navy. VVV RIW DE RKB91 QSA? QTC. RKB91 119 37 30 0601 119 = SML FOR RCV RMP RIW = 11111 75662 72446 ... 64019 09410 30032 = AR RKB91	CW	(TR2)
M32b	8816	3-6-2013	Mon	1002	Russian Naval Aviation. rjf94 rjc38 de 52851 qth 5702 3759 qtr 1000 qre XLWF 1045 k - qqm XLWF 1045 sk	CW	(WP3)
M32b	8816	3-6-2013	Mon	1019	Russian Naval Aviation. rjf94 rjc38 de 10492 qqm XLWF 1017 sk	CW	(WP3)
M32b	8816	4-6-2013	Tue	1003	Russian Naval Aviation. rjf94 rcb de 26004 qto 0950 qrd XUMO XLLV qah 5200 qbd 0500 k	CW	(WP3)
M32b	8816	7-6-2013	Fri	1046	Russian Navy Aviation. RCB QTO 1030 QRD XLLV XUMO QAH 5200 QBD 200 K (see N&O 189)	CW	(TR2)
M32b	8816	13-6-2013	Thu	1802	Russian Naval Aviation. rjf94 rjc38 de 52856 qay XLPB 0905 qre XLWF 0950 k - qqm XLWF 0950 sk	CW	(WP3)
M32b	8816	13-6-2013	Thu	1802	Russian Naval Aviation. rjf94 rjc38 de 52856 qto1120 qrd XLMV XLWF qbd 5200 qre 1430 k - qay XLPB 1225 qbg 5500 - qql ULPE 1330 qre XLMV 1435 k - qqm XLMV 1442 sk	CW	(WP3)
M32b	8816	18-6-2013	Tue	0840	Russian Naval Aviation Moscow. vvv 88108 88108 88108 de rjf94 rjf94 qsa? k	CW	(WP3)
M32b	8816	25-6-2013	Tue	0843	52856: Russian Naval Air Transport. rjc38 rjf94 de 52856 qay XLPB 0835 qbd 2800 qre XLWF 0935 k - qqm XLWF 0930 sk	CW	(WP3)
M32b	8816	25-6-2013	Tue	1015	63180: Russian Naval Air Transport. rcb rjf94 de 63180 qto 1006 qrd XLLV XMKK qah 5800 qbd 0500 k - qth 5820 2040 qtr 1103 qah 5800 qbd 0400 k - qth 5945 2427 qtr 1145 qah 5800 qal XLLV 1230 qbd 0300 k qqm XLLV 1233 sk	CW	(WP3)
M32b	8816	25-6-2013	Tue	1430	63180: Russian Naval Air Transport. rcb rjf94 de 63180 qto 1417 qrd XUMO XLLV qah 5200 qbd 0500 k - qay UUWR 1515 qah 5200 qal XUMO 1610 qbd 0400 k - qqm XUMO 1611 sk	CW	(WP3)
M32b	8816	27-6-2013	Thu	0650	26004: Russian Naval Air Transport. rcb rjf94 de 26004 qto 1500 qrd XMKK XLLV qah 5500 qbd 0500 k - qth 5933 2310 qtr 1600 qah 5500 qbd 0400 k - qth 5700 1955 qtr 1645 qah 5500 qal XMKK 1703 qbd 0300 k - qqm XMKK 1743 sk	CW	(WP3)
M32b	8816	27-6-2013	Thu	0650	63180: Russian Naval Air Transport. rcb rjf94 de 63180 qto 0637 qrd XMKK XLLV qah 5500 qbd 0500 k - qth 6006 2627 qtr 0710 qah 5500 qal XLLV 0750 qbd 0400 k - qqm XLLV 0747 sk	CW	(WP3)
M32b	8816	27-6-2013	Thu	0650	52851: Russian Naval Air Transport. rjf94 rjc38 de 52851 qto 1705 qrd XLMV XUMO qbd 4700 qre 2110 k - qql ULWC 1815 qbg 6700 k	CW	(WP3)
M32c	3531	30-6-2013	Sun	2041	Russian Strategic AF: REA4 REA4 = 30200 99900 29150 20069 60660 62505 10276 20190 70200 82110 93377 = REA4 k	CW	(MPJ/JU)
M42	11068	1-6-2013	Sat	0824	Russian Intel.	FSK 200/1000	(FMB)
M42	16011	1-6-2013	Sat	1105	Russian Intel	FSK 200/1000	(MCO)
M42	16322	1-6-2013	Sat	1816	Russian Intel. 576 1 00000 +++++ +++++ 162	Baudot 200/500	(MCO)
M42	16320	3-6-2013	Mon	0150	Russian Intel.	FSK 200/1000	(Dan)
M42	16320	4-6-2013	Tue	0150	Russian Intel.	FSK 200/1000	(Dan)
M42	17471	5-6-2013	Wed	0003	Russian Intel, Moscow	Baudot 200/500	(MCO)
M42	16320	5-6-2013	Wed	0150	Russian Intel.	FSK 200/1000	(Dan)
M42	19396	5-6-2013	Wed	0604	Russian Intel.	FSK 200/500	(EW)
M42	10526	5-6-2013	Wed	1830	Russian gov/intel. 0-msg	Baudot 200/500	(FMB)
M42	14621	5-6-2013	Wed	1841	Russian Intel 576 1 0000 +++++ +++++ 162	Baudot 200/500	(MCO)
M42	11024	6-6-2013	Thu	1900	Russian Intel 6 20	FSK 200/500	(HFD)

Enigma	Freq.	Date	Day	UTC	Remarks	Mode	Ctrlb
M42	9092	6-6-2013	Thu	1910	Russian Intel 6 20	FSK 200/500	(HFD)
M42	6785	6-6-2013	Thu	1920	Russian Intel 6 20	FSK 200/500	(HFD)
M42	13381	8-6-2013	Sat	0810	Russian Intel.	FSK 200/1000	(FMB)
M42	11068	8-6-2013	Sat	0820	Russian Intel.	FSK 200/1000	(FMB)
M42	14446	8-6-2013	Sat	0910	Russian Intel.	FSK 200/1000	(FMB)
M42	12189	8-6-2013	Sat	0920	Russian Intel.	FSK 200/1000	(FMB)
M42	16011	8-6-2013	Sat	1054	Russian Intel, Moscow	FSK 200/1000	(MCO)
M42	16320	10-6-2013	Mon	0150	Russian Intel.	FSK 200/1000	(Dan)
M42	16320	11-6-2013	Tue	0150	Russian Intel.	FSK 200/1000	(Dan)
M42	9067	11-6-2013	Tue	1710	Russian Intel.	FSK 200/1000	(FMB)
M42	11122	11-6-2013	Tue	1720	Russian Intel.	FSK 200/1000	(FMB)
M42	11024	13-6-2013	Thu	0700	Russian Intel. 00000+++++++162)5761	FSK 200/1000	(DDy)
M42	6786	13-6-2013	Thu	0720	Russian Intel. 00000+++++++162)5761	FSK 200/1000	(DDy)
M42	11146	13-6-2013	Thu	1528	Russian Intel. 0-msg	FSK 200/1000	(FMB)
M42	9153	13-6-2013	Thu	1537	Russian Intel. 0-msg	FSK 200/1000	(FMB)
M42	11024	13-6-2013	Thu	1900	Russian gov/intel. 0-msg	Baudot 200/500	(FMB)
M42	13381	15-6-2013	Sat	0810	Russian Intel.	FSK 200/1000	(FMB)
M42	11068	15-6-2013	Sat	0820	Russian Intel.	FSK 200/1000	(FMB)
M42	14406	15-6-2013	Sat	1110	Russian Intel.	FSK 200/1000	(FMB)
M42	12182	15-6-2013	Sat	1120	Russian Intel.	FSK 200/1000	(FMB)
M42	17496	15-6-2013	Sat	1200	Russian Intel 8 01	FSK 200/500	(HFD)
M42	15932	15-6-2013	Sat	1209	Russian Intel. 0-msg	FSK 200/1000	(FMB)
M42	15932	15-6-2013	Sat	1210	Russian Intel 8 01	FSK 200/500	(HFD)
M42	13484	15-6-2013	Sat	1220	Russian gov/intel. 0-msg	Baudot 200/500	(FMB)
M42	13481	15-6-2013	Sat	1220	Russian Intel 8 01	FSK 200/500	(HFD)
M42	16320	17-6-2013	Mon	0150	Russian Intel. Link ID 13366	FSK 200/1000	(Dan)
M42	16320	18-6-2013	Tue	0150	Russian Intel. Link ID 13346	FSK 200/1000	(Dan)
M42	16320	19-6-2013	Wed	0150	Russian Intel. Link ID 13346	FSK 200/1000	(Dan)
M42	11611	21-6-2013	Fri	0653	Russian Intel.	FSK 200/1000	(FMB)
M42	11474	21-6-2013	Fri	0700	Russian Intel.	FSK 200/1000	(FMB)
M42	9233	21-6-2013	Fri	0710	Russian Intel.	FSK 200/1000	(FMB)
M42	9937	21-6-2013	Fri	0745	Russian Intel.	FSK 200/1000	(FMB)
M42	12167	21-6-2013	Fri	0750	Russian Intel.	FSK 200/1000	(FMB)
M42	16190	22-6-2013	Sat	0900	Russian Intel.	FSK 200/1000	(FMB)
M42	19878	22-6-2013	Sat	1225	Russian diplo Msg on link 00063	USB/Serdolik MFSK-34/OFDM-34	(LDO)
M42	16320	24-6-2013	Mon	0150	Russian Intel.	FSK 200/1000	(Dan)
M42	5089	24-6-2013	Mon	1907	Russian Intel.	FSK 200/1000	(FMB)
M42	7337	24-6-2013	Mon	1910	Russian Intel.	FSK 200/1000	(FMB)
M42	16320	25-6-2013	Tue	0150	Russian Intel. Link ID 08196	FSK 200/1000	(Dan)
M42	6791	25-6-2013	Tue	1706	Russian Intel.	FSK 200/1000	(FMB)
M42	9067	25-6-2013	Tue	1710	Russian Intel.	FSK 200/1000	(FMB)
M42	11122	25-6-2013	Tue	1720	Russian Intel.	FSK 200/1000	(FMB)
M42	16320	26-6-2013	Wed	0150	Russian Intel.	FSK 200/1000	(Dan)
M42	16320	27-6-2013	Thu	0150	Russian Intel. Link ID 00058	FSK 200/1000	(Dan)
M42	11146	27-6-2013	Thu	1532	Russian Intel.	FSK 200/1000	(FMB)
M42	9153	27-6-2013	Thu	1540	Russian Intel.	FSK 200/1000	(FMB)
M42	16320	28-6-2013	Fri	0150	Russian Intel.	FSK 200/1000	(Dan)
M42	14462	30-6-2013	Sun	0935	Russian diplo receiving tfc from unid embassy	USB/Serdolik MFSK-34/ODFM-45	(LDO)
M51	9121	3-6-2013	Mon	2319	5LGs i.p.	CW	(MCO)
M51	7529	5-6-2013	Wed	1850	ip	CW	(FMB)
M51	7437	8-6-2013	Sat	1010	ip	CW	(FMB)
M51	9212	9-6-2013	Sun	1916	ip	CW	(FMB)
M51	8016	9-6-2013	Sun	1921	ip	CW	(FMB)
M51	5453	11-6-2013	Tue	1941	ip	CW	(FMB)
M51	5454.5	13-6-2013	Thu	0558	= nr 4 1985 = 5FGs	CW	(LG2)
M51	9213	17-6-2013	Mon	1802	ip	CW	(FMB)
M51	8016	18-6-2013	Tue	1640	ip	CW	(FMB)
M51	9213	22-6-2013	Sat	1057	ip	CW	(FMB)
M51	9213	22-6-2013	Sat	1535	ip	CW	(FMB)
M51	9461	22-6-2013	Sat	1535	ip	CW	(FMB)

Enigma	Freq.	Date	Day	UTC	Remarks	Mode	Ctrb
M51	8016	24-6-2013	Mon	1535	ip	CW	(FMB)
M51	7535	26-6-2013	Wed	1918	ip	CW	(FMB)
M89	8789	3-6-2013	Mon	0015	V WITN (x3) DE GNXG (x2) (Cont'd) //10779	CW	(JPL)
M89	10779	3-6-2013	Mon	0015	V WITN (x3) DE GNXG (x2) (Cont'd) //8789	CW	(JPL)
M89	10998	3-6-2013	Mon	0017	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	10640	3-6-2013	Mon	0020	VVV (x3) Q2M DE NYZ (x2) QSA ? K	CW	(JPL)
M89	7582	3-6-2013	Mon	0028	V 7NPE (x3) DE QV5B (x2) (Cont'd) //8110	CW	(JPL)
M89	8110	3-6-2013	Mon	0028	V 7NPE (x3) DE QV5B (x2) (Cont'd) //7582	CW	(JPL)
M89	7582	3-6-2013	Mon	0717	V 7NPE (x3) DE QV5B (x2) (Cont'd) //8110	CW	(JPL)
M89	8110	3-6-2013	Mon	0717	V 7NPE (x3) DE QV5B (x2) (Cont'd) //7582	CW	(JPL)
M89	10640	3-6-2013	Mon	0720	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	6840	3-6-2013	Mon	0720	VVV (x3) Q2M DE NYZ (x2) QSA ? K //10640	CW	(JPL)
M89	10779	3-6-2013	Mon	0725	V WITN (x3) DE GNXG (x2) (Cont'd)	CW	(JPL)
M89	4225	3-6-2013	Mon	1340	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	5500	3-6-2013	Mon	1340	V 7NPE (x3) DE QV5B (x2) (Cont'd) //4225	CW	(JPL)
M89	4512	3-6-2013	Mon	1342	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	3797	3-6-2013	Mon	1342	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	4590	3-6-2013	Mon	1344	V WITN (x3) DE GNXG (x2) (Cont'd) //7607	CW	(JPL)
M89	7607	3-6-2013	Mon	1344	V WITN (x3) DE GNXG (x2) (Cont'd) //4590	CW	(JPL)
M89	3330	3-6-2013	Mon	1346	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	10180	3-6-2013	Mon	1447	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	10998	3-6-2013	Mon	1453	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	5500	3-6-2013	Mon	1834	V 7NPE (x3) DE QV5B (x2) (Cont'd) //4225	CW	(JPL)
M89	4225	3-6-2013	Mon	1834	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	7607	3-6-2013	Mon	1835	V WITN (x3) DE GNXG (x2) (Cont'd) //4590	CW	(JPL)
M89	4590	3-6-2013	Mon	1835	V WITN (x3) DE GNXG (x2) (Cont'd) //7607	CW	(JPL)
M89	10998	3-6-2013	Mon	1836	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	4512	3-6-2013	Mon	1837	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	3797	3-6-2013	Mon	1837	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	5555	3-6-2013	Mon	1838	In tfc: 746D 3NT4 .AUA 3.5N 3N7N (see N&O 189)	CW	(JPL)
M89	3330	3-6-2013	Mon	1903	2SLC msg: EEEGA GA CQ63 RMKS 9S EEEEE (see N&O 189)	CW	(JPL)
M89	10206	3-6-2013	Mon	2122	In tfc: 3UT4 754. 543D 47NU D5TU UT.3 (see N&O 189)	CW	(JPL)
M89	10998	3-6-2013	Mon	2139	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	11266	3-6-2013	Mon	2141	In tfc: QSL 0537 QSL 0537 K (see N&O 189)	CW	(JPL)
M89	7607	3-6-2013	Mon	2153	V WITN (x3) DE GNXG (x2) (Cont'd)	CW	(JPL)
M89	3642	3-6-2013	Mon	2200	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5230	CW	(JPL)
M89	5230	3-6-2013	Mon	2200	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //3642	CW	(JPL)
M89	5500	3-6-2013	Mon	2209	V 7NPE (x3) DE QV5B (x2) (Cont'd) //4225	CW	(JPL)
M89	4225	3-6-2013	Mon	2209	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	8040	3-6-2013	Mon	2211	V H2FL (x3) DE DRV8 (x2) (Cont'd)	CW	(JPL)
M89	8110	4-6-2013	Tue	0258	V 7NPE (x3) DE QV5B (x2) (Cont'd) //7582	CW	(JPL)
M89	7582	4-6-2013	Tue	0258	V 7NPE (x3) DE QV5B (x2) (Cont'd) //8110	CW	(JPL)
M89	10779	4-6-2013	Tue	0300	V WITN (x3) DE GNXG (x2) (Cont'd)	CW	(JPL)
M89	10180	4-6-2013	Tue	0302	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	10528	4-6-2013	Wed	0305	In tfc: DUA6 ADU6 6T3D DN37 TU73 AR K (see N&O 189)	CW	(JPL)
M89	10998	4-6-2013	Tue	1434	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	10998	4-6-2013	Tue	2024	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	5230	4-6-2013	Tue	2029	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //3642	CW	(JPL)
M89	3642	4-6-2013	Tue	2029	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5230	CW	(JPL)
M89	4590	4-6-2013	Tue	2031	V WITN (x3) DE GNXG (x2) (Cont'd) //7607	CW	(JPL)
M89	7607	4-6-2013	Tue	2031	V WITN (x3) DE GNXG (x2) (Cont'd) //4590	CW	(JPL)
M89	10998	4-6-2013	Tue	2334	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	7582	5-6-2013	Wed	0154	V 7NPE (x3) DE QV5B (x2) (Cont'd) //8110	CW	(JPL)
M89	8110	5-6-2013	Wed	0154	V 7NPE (x3) DE QV5B (x2) (Cont'd) //7582	CW	(JPL)
M89	10779	5-6-2013	Wed	0156	V WITN (x3) DE GNXG (x2) (Cont'd) //8789	CW	(JPL)
M89	8789	5-6-2013	Wed	0156	V WITN (x3) DE GNXG (x2) (Cont'd) //10779	CW	(JPL)
M89	10998	5-6-2013	Wed	0200	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	10836	5-6-2013	Wed	0203	In chat/tfc: QSL 1005 K (see N&O 189)	CW	(JPL)
M89	6840	5-6-2013	Wed	0220	VVV (x3) Q2M DE NYZ (x2) QSA ? K //10640	CW	(JPL)
M89	10640	5-6-2013	Wed	0220	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	10811	5-6-2013	Wed	0225	In chat/tfc: OK QSL 1025 K (see N&O 189)	CW	(JPL)
M89	12481	5-6-2013	Wed	0233	In chat/tfc: IEC = POXV AR K. R OK N EEE SR WK NR ..65 ..2 K (see N&O	CW	(JPL)

Enigma	Freq.	Date	Day	UTC	Remarks	Mode	Ctrb
					189)		
M89	10456	5-6-2013	Wed	0303	In tfc: 37. 605 00 686.519 TO ... (see N&O 189)	CW	(JPL)
M89	10528	5-6-2013	Wed	0315	In tfc: MSG NR 4125 CK 61 28 0605 RMKS 6865516 TO 6865519 K (see N&O 189)	CW	(JPL)
M89	5500	5-6-2013	Wed	1112	V 7NPE (x3) DE QV5B (x2) (Cont'd)	CW	(JPL)
M89	5588	5-6-2013	Wed	1114	V 8CPZ (x3) DE XW6W (x2) (Cont'd)	CW	(JPL)
M89	6840	5-6-2013	Wed	1120	VVV (x3) Q2M DE NYZ (x2) QSA ? K //10640	CW	(JPL)
M89	10640	5-6-2013	Wed	1120	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	3797	5-6-2013	Wed	1125	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	4512	5-6-2013	Wed	1125	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	8789	5-6-2013	Wed	1129	V WITN (x3) DE GNXG (x2) (Cont'd) //10779	CW	(JPL)
M89	10779	5-6-2013	Wed	1129	V WITN (x3) DE GNXG (x2) (Cont'd) //8789	CW	(JPL)
M89	10180	5-6-2013	Wed	1131	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5801	CW	(JPL)
M89	5801	5-6-2013	Wed	1131	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //10180	CW	(JPL)
M89	10998	5-6-2013	Wed	1136	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	3725	6-6-2013	Thu	1616	V WITN (x3) DE GNXG (x2) (Cont'd) //7607	CW	(JPL)
M89	7607	6-6-2013	Thu	1616	V WITN (x3) DE GNXG (x2) (Cont'd) //3725	CW	(JPL)
M89	3797	6-6-2013	Thu	1618	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	4512	6-6-2013	Thu	1618	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	4860	6-6-2013	Thu	1620	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	6840	6-6-2013	Thu	1620	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	3330	6-6-2013	Thu	1625	V 8CPZ (x3) DE XW6W (x2) (Cont'd)	CW	(JPL)
M89	5230	6-6-2013	Thu	1627	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //3642	CW	(JPL)
M89	3642	6-6-2013	Thu	1627	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5230	CW	(JPL)
M89	3330	6-6-2013	Thu	1857	V 8CPZ (x3) DE XW6W (x2) (Cont'd)	CW	(JPL)
M89	3642	6-6-2013	Thu	1922	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5230	CW	(JPL)
M89	5230	6-6-2013	Thu	1922	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //3642	CW	(JPL)
M89	10180	7-6-2013	Fri	0117	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //8198	CW	(JPL)
M89	8198	7-6-2013	Fri	0117	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //10180	CW	(JPL)
M89	6840	7-6-2013	Fri	0120	VVV (x3) Q2M DE NYZ (x2) QSA ? K //10640	CW	(JPL)
M89	10640	7-6-2013	Fri	0120	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	10998	7-6-2013	Fri	0125	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	10371	7-6-2013	Fri	0207	In tfc: ATU6 3T75 AR K. 54TA 54TA AR AR = 3N6A 3N6U AR K. MK.. GA QSL 11.6 K	CW	(JPL)
M89	10779	7-6-2013	Fri	0207	V WITN (x3) DE GNXG (x2) (Cont'd) //8789	CW	(JPL)
M89	8789	7-6-2013	Fri	0207	V WITN (x3) DE GNXG (x2) (Cont'd) //10779	CW	(JPL)
M89	10456	7-6-2013	Fri	0216	In chat: R RPT 62W K. RPT AS RPT QSL K. EEE R GA (see N&O 189)	CW	(JPL)
M89	11161	7-6-2013	Fri	0230	V HIE3 (x3) DE 6JDU (x2) HR MSG GA. HR 7G GA MSG NR 007/EX CK = (see N&O 189)	CW	(JPL)
M89	10779	7-6-2013	Fri	1056	V WITN (x3) DE GNXG (x2) (Cont'd) //8789	CW	(JPL)
M89	8789	7-6-2013	Fri	1056	V WITN (x3) DE GNXG (x2) (Cont'd) //10779	CW	(JPL)
M89	4512	7-6-2013	Fri	1057	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	3797	7-6-2013	Fri	1057	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	3330	7-6-2013	Fri	1232	V 8CPZ (x3) DE XW6W (x2) (Cont'd)	CW	(JPL)
M89	10456	7-6-2013	Fri	1234	In chat: = 444 A3U4434 U4444 = = (see N&O 189)	CW	(JPL)
M89	7607	7-6-2013	Fri	1812	V WITN (x3) DE GNXG (x2) (Cont'd)	CW	(JPL)
M89	10998	7-6-2013	Fri	1814	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	10596	7-6-2013	Fri	1816	In chat: U3NA ..U4 A.5N AN6U. AR AR K. R OK. R K R K. BOZU. WK ? K	CW	(JPL)
M89	5230	7-6-2013	Fri	1900	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	3797	7-6-2013	Fri	1901	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	4512	7-6-2013	Fri	1901	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	10998	7-6-2013	Fri	2003	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	10386	7-6-2013	Fri	2006	In tfc: MSG NR 1622/EX 0507 = P4/.3 CQ QSY NR 04 QSY NR 04 V (Silent ù 2007z)	CW	(JPL)
M89	6852	7-6-2013	Fri	2017	In tfc: 88 83T DE XDBE QSL ? K (see N&O 189)	CW	(JPL)
M89	5821	7-6-2013	Fri	2141	In tfc: AR K. OK OK HA EEE (Silent ù 2143z)	CW	(JPL)
M89	5230	7-6-2013	Fri	2153	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //3642	CW	(JPL)
M89	3642	7-6-2013	Fri	2153	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5230	CW	(JPL)
M89	4474	7-6-2013	Fri	2156	V RXP7 (x3) DE CZT2 (x2) (Cont'd) //10998	CW	(JPL)
M89	10998	7-6-2013	Fri	2156	V RXP7 (x3) DE CZT2 (x2) (Cont'd) //4474	CW	(JPL)
M89	10585	7-6-2013	Fri	2205	In tfc: N6U7 56UD 43T. A3ND A3.. (Cont'd) AR QSL ? K R OK OK	CW	(JPL)
M89	6773	7-6-2013	Fri	2229	V H2FL (x3) DE DRV8 (x2) (Cont'd)	CW	(JPL)

Enigma	Freq.	Date	Day	UTC	Remarks	Mode	Ctrb
M89	8789	8-6-2013	Sat	0243	V WITN (x3) DE GNXG (x2) (Cont'd)	CW	(JPL)
M89	10180	8-6-2013	Sat	0247	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5801	CW	(JPL)
M89	5801	8-6-2013	Sat	0247	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //10180	CW	(JPL)
M89	10998	8-6-2013	Sat	0250	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	10180	8-6-2013	Sat	0858	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //8102	CW	(JPL)
M89	8102	8-6-2013	Sat	0858	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //10180	CW	(JPL)
M89	10998	8-6-2013	Sat	0900	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	8345	8-6-2013	Sat	0904	In tfc: AN5U 5D4U T4.D 5UT7 (Cont'ed) AR QSL ? K. R R (Silent - 0906z)	CW	(JPL)
M89	10201	8-6-2013	Sat	0917	In tfc: N3D3 AD5T A764 ..7N 763D AR K. GA GA GA R QSL 182. K UP. . K UP. SK K	CW	(JPL)
M89	4225	9-6-2013	Sun	1109	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	5500	9-6-2013	Sun	1109	V 7NPE (x3) DE QV5B (x2) (Cont'd) //4225	CW	(JPL)
M89	10180	9-6-2013	Sun	1111	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	4590	9-6-2013	Sun	1113	V WITN (x3) DE GNXG (x2) (Cont'd) //7607	CW	(JPL)
M89	7607	9-6-2013	Sun	1113	V WITN (x3) DE GNXG (x2) (Cont'd) //4590	CW	(JPL)
M89	5588	9-6-2013	Sun	1115	V 8CPZ (x3) DE XW6W (x2) (Cont'd)	CW	(JPL)
M89	6840	9-6-2013	Sun	1120	VVV (x3) Q2M DE NYZ (x2) QSA ? K //10640	CW	(JPL)
M89	10640	9-6-2013	Sun	1120	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	6840	9-6-2013	Sun	1720	VVV (x3) Q2M DE NYZ (x2) QSA ? K	CW	(JPL)
M89	4225	9-6-2013	Sun	1725	V 7NPE (x3) DE QV5B (x2) (Cont'd)	CW	(JPL)
M89	4512	9-6-2013	Sun	1727	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	3797	9-6-2013	Sun	1727	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	7607	9-6-2013	Sun	1730	V WITN (x3) DE GNXG (x2) (Cont'd) //4590	CW	(JPL)
M89	4590	9-6-2013	Sun	1730	V WITN (x3) DE GNXG (x2) (Cont'd) //7607	CW	(JPL)
M89	5588	9-6-2013	Sun	1734	V 8CPZ (x3) DE XW6W (x2) (Cont'd)	CW	(JPL)
M89	3300	9-6-2013	Sun	1805	V 8CPZ (x3) DE XW6W (x2) (Cont'd)	CW	(JPL)
M89	5230	9-6-2013	Sun	1807	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //3642	CW	(JPL)
M89	3642	9-6-2013	Sun	1807	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5230	CW	(JPL)
M89	4474	9-6-2013	Sun	1822	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	5801	10-6-2013	Mon	0230	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //10180	CW	(JPL)
M89	10180	10-6-2013	Mon	0230	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5801	CW	(JPL)
M89	11214	10-6-2013	Mon	0234	In tfc: 3A5D 6NA3 6TU7 ND7U 3746 7U4N AN74 3A67 AR K (see N&O 189)	CW	(JPL)
M89	11271	10-6-2013	Mon	0241	8XNJ DE RQE7 (see N&O 189)	CW	(JPL)
M89	11324	10-6-2013	Mon	0248	In tfc: 55061 170 RMKS 25497.. Eee RMKS 2549795 TO 2549792 K = UNTA 7.. 357. 64.. (Cont'ed) AR	CW	(JPL)
M89	11324	10-6-2013	Mon	0259	In tfc: A4UT 675A 3A47 7T3? (see N&O 189)	CW	(JPL)
M89	5500	10-6-2013	Mon	1058	V 7NPE (x3) DE QV5B (x2) (Cont'd) //4225	CW	(JPL)
M89	4225	10-6-2013	Mon	1058	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	5588	10-6-2013	Mon	1100	V 8CPZ (x3) DE XW6W (x2) (Cont'd)	CW	(JPL)
M89	3797	10-6-2013	Mon	1102	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	4512	10-6-2013	Mon	1102	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	10180	10-6-2013	Mon	1105	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	11324	10-6-2013	Mon	1244	In chat: QSL 2043 K. R QSL 2044 QSL 2044 K. R QSL 2044 QSL 2044 K. QSL 2043 K. R QSL 2044 QSL 2044 K	CW	(JPL)
M89	8110	11-6-2013	Tue	0033	V 7NPE (x3) DE QV5B (x2) (Cont'd) //7582	CW	(JPL)
M89	7582	11-6-2013	Tue	0033	V 7NPE (x3) DE QV5B (x2) (Cont'd) //8110	CW	(JPL)
M89	10998	11-6-2013	Tue	0036	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	10779	11-6-2013	Tue	0038	V WITN (x3) DE GNXG (x2) (Cont'd) //8789	CW	(JPL)
M89	8789	11-6-2013	Tue	0038	V WITN (x3) DE GNXG (x2) (Cont'd) //10779	CW	(JPL)
M89	10779	11-6-2013	Tue	1033	V WITN (x3) DE GNXG (x2) (Cont'd) //8789	CW	(JPL)
M89	8789	11-6-2013	Tue	1033	V WITN (x3) DE GNXG (x2) (Cont'd) //10779	CW	(JPL)
M89	8040	11-6-2013	Tue	1035	V H2FL (x3) DE DRV8 (x2) (Cont'd) //6773	CW	(JPL)
M89	6773	11-6-2013	Tue	1035	V H2FL (x3) DE DRV8 (x2) (Cont'd) //8040	CW	(JPL)
M89	4225	11-6-2013	Tue	1037	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	5500	11-6-2013	Tue	1037	V 7NPE (x3) DE QV5B (x2) (Cont'd) //4225	CW	(JPL)
M89	5588	11-6-2013	Tue	1039	V 8CPZ (x3) DE XW6W (x2) (Cont'd)	CW	(JPL)
M89	10180	11-6-2013	Tue	1041	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	5500	11-6-2013	Tue	1751	V 7NPE (x3) DE QV5B (x2) (Cont'd)	CW	(JPL)
M89	5588	11-6-2013	Tue	1753	V 8CPZ (x3) DE XW6W (x2) (Cont'd)	CW	(JPL)
M89	4512	11-6-2013	Tue	1754	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	3797	11-6-2013	Tue	1754	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)

Enigma	Freq.	Date	Day	UTC	Remarks	Mode	Ctrb
M89	10998	11-6-2013	Tue	1756	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	7602	11-6-2013	Tue	1758	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5230	CW	(JPL)
M89	5230	11-6-2013	Tue	1758	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //7602	CW	(JPL)
M89	4590	11-6-2013	Tue	1800	V WITN (x3) DE GNXG (x2) (Cont'd) //7607	CW	(JPL)
M89	7607	11-6-2013	Tue	1800	V WITN (x3) DE GNXG (x2) (Cont'd) //4590	CW	(JPL)
M89	4860	11-6-2013	Tue	1820	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	6840	11-6-2013	Tue	1820	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	7602	11-6-2013	Tue	1840	v DKG6 DKG6 DKG6 de 3A7D 3A7D	CW	(FN)
M89	11088	11-6-2013	Tue	2111	In tfc: U6T4 N5DA 5U6T 4U5D 3UA7 TU64 UN34 3N4U U6DA .6D3 N73A (see N&O 189)	CW	(JPL)
M89	10998	11-6-2013	Tue	2341	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	7602	11-6-2013	Tue	2345	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5230	CW	(JPL)
M89	5500	12-6-2013	Wed	1543	V 7NPE (x3) DE QV5B (x2) (Cont'd) //4225	CW	(JPL)
M89	4225	12-6-2013	Wed	1543	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	10998	12-6-2013	Wed	1545	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	7607	12-6-2013	Wed	1546	V WITN (x3) DE GNXG (x2) (Cont'd) //4590	CW	(JPL)
M89	4590	12-6-2013	Wed	1546	V WITN (x3) DE GNXG (x2) (Cont'd) //7607	CW	(JPL)
M89	4512	12-6-2013	Wed	1547	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	3797	12-6-2013	Wed	1547	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	5588	12-6-2013	Wed	1548	V 8CPZ (x3) DE XW6W (x2) (Cont'd)	CW	(JPL)
M89	7602	12-6-2013	Wed	1549	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	10998	12-6-2013	Wed	1839	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	5500	12-6-2013	Wed	1841	V 7NPE (x3) DE QV5B (x2) (Cont'd) //4225	CW	(JPL)
M89	4225	12-6-2013	Wed	1841	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	7607	12-6-2013	Wed	1843	V WITN (x3) DE GNXG (x2) (Cont'd) //4590	CW	(JPL)
M89	4590	12-6-2013	Wed	1843	V WITN (x3) DE GNXG (x2) (Cont'd) //7607	CW	(JPL)
M89	3797	12-6-2013	Wed	1845	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	4512	12-6-2013	Wed	1845	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	3330	12-6-2013	Wed	1846	V 8CPZ (x3) DE XW6W (x2) (Cont'd)	CW	(JPL)
M89	5230	12-6-2013	Wed	1847	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	10998	13-6-2013	Thu	0014	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	10779	13-6-2013	Thu	0017	V WITN (x3) DE GNXG (x2) (Cont'd)	CW	(JPL)
M89	8110	13-6-2013	Thu	0019	V 7NPE (x3) DE QV5B (x2) (Cont'd) //7582	CW	(JPL)
M89	7582	13-6-2013	Thu	0019	V 7NPE (x3) DE QV5B (x2) (Cont'd) //8110	CW	(JPL)
M89	6840	13-6-2013	Thu	0020	VVV (x3) Q2M DE NYZ (x2) QSA ? K //10640	CW	(JPL)
M89	10640	13-6-2013	Thu	0020	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	10779	13-6-2013	Thu	0028	V WITN (x3) DE GNXG (x2) (Cont'd) //8789	CW	(JPL)
M89	8789	13-6-2013	Thu	0028	V WITN (x3) DE GNXG (x2) (Cont'd) //10779	CW	(JPL)
M89	10998	13-6-2013	Thu	2209	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	7607	13-6-2013	Thu	2210	V WITN (x3) DE GNXG (x2) (Cont'd) //4590	CW	(JPL)
M89	4590	13-6-2013	Thu	2210	V WITN (x3) DE GNXG (x2) (Cont'd) //7607	CW	(JPL)
M89	4860	13-6-2013	Thu	2220	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	6840	13-6-2013	Thu	2220	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	8040	13-6-2013	Thu	2227	V H2FL (x3) DE DRV8 (x2) (Cont'd) //6773	CW	(JPL)
M89	6773	13-6-2013	Thu	2227	V H2FL (x3) DE DRV8 (x2) (Cont'd) //8040	CW	(JPL)
M89	10180	14-6-2013	Fri	0953	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	8789	14-6-2013	Fri	0955	V WITN (x3) DE GNXG (x2) (Cont'd) //10779	CW	(JPL)
M89	10779	14-6-2013	Fri	0955	V WITN (x3) DE GNXG (x2) (Cont'd) //8789	CW	(JPL)
M89	6773	14-6-2013	Fri	0957	V H2FL (x3) DE DRV8 (x2) (Cont'd) //8040	CW	(JPL)
M89	8040	14-6-2013	Fri	0957	V H2FL (x3) DE DRV8 (x2) (Cont'd) //6773	CW	(JPL)
M89	5588	14-6-2013	Fri	0959	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	4512	14-6-2013	Fri	1842	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	3797	14-6-2013	Fri	1842	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	3330	14-6-2013	Fri	1843	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	10998	14-6-2013	Fri	1844	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	7607	14-6-2013	Fri	1845	V WITN (x3) DE GNXG (x2) (Cont'd)	CW	(JPL)
M89	10180	14-6-2013	Fri	1851	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5801	CW	(JPL)
M89	5801	14-6-2013	Fri	1851	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //10180	CW	(JPL)
M89	10180	15-6-2013	Sat	0046	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	10779	15-6-2013	Sat	0049	V WITN (x3) DE GNXG (x2) (Cont'd) //8789	CW	(JPL)
M89	8789	15-6-2013	Sat	0049	V WITN (x3) DE GNXG (x2) (Cont'd) //10779	CW	(JPL)
M89	10998	15-6-2013	Sat	0051	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)

Enigma	Freq.	Date	Day	UTC	Remarks	Mode	Ctrb
M89	10779	15-6-2013	Sat	0114	V WITN (x3) DE GNXG (x2) (Cont'd) //8789	CW	(JPL)
M89	8789	15-6-2013	Sat	0114	V WITN (x3) DE GNXG (x2) (Cont'd) //10779	CW	(JPL)
M89	10640	15-6-2013	Sat	0120	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	6840	15-6-2013	Sat	0120	VVV (x3) Q2M DE NYZ (x2) QSA ? K //10640	CW	(JPL)
M89	10180	15-6-2013	Sat	1110	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	7607	15-6-2013	Sat	1112	V WITN (x3) DE GNXG (x2) (Cont'd)	CW	(JPL)
M89	3797	15-6-2013	Sat	1115	V H2FL (x3) DE DRV8 (x2) (Cont'd)	CW	(JPL)
M89	5588	15-6-2013	Sat	1117	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	6840	15-6-2013	Sat	1120	VVV (x3) Q2M DE NYZ (x2) QSA ? K //10640	CW	(JPL)
M89	10640	15-6-2013	Sat	1120	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	3330	15-6-2013	Sat	1721	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	3797	15-6-2013	Sat	1722	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	4512	15-6-2013	Sat	1722	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	7607	15-6-2013	Sat	1723	V WITN (x3) DE GNXG (x2) (Cont'd) //4590	CW	(JPL)
M89	4590	15-6-2013	Sat	1723	V WITN (x3) DE GNXG (x2) (Cont'd) //7607	CW	(JPL)
M89	10998	15-6-2013	Sat	1724	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	3642	15-6-2013	Sat	1725	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //7602	CW	(JPL)
M89	7602	15-6-2013	Sat	1725	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //3642	CW	(JPL)
M89	5588	15-6-2013	Sat	2323	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	10998	15-6-2013	Sat	2324	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	4590	15-6-2013	Sat	2327	V WITN (x3) DE GNXG (x2) (Cont'd) //7607	CW	(JPL)
M89	7607	15-6-2013	Sat	2327	V WITN (x3) DE GNXG (x2) (Cont'd) //4590	CW	(JPL)
M89	7602	15-6-2013	Sat	2329	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	10998	16-6-2013	Sun	0218	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	5500	16-6-2013	Sun	1611	V 7NPE (x3) DE QV5B (x2) (Cont'd) //4225	CW	(JPL)
M89	4225	16-6-2013	Sun	1611	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	10998	16-6-2013	Sun	1612	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	4590	16-6-2013	Sun	1614	V WITN (x3) DE GNXG (x2) (Cont'd) //7607	CW	(JPL)
M89	7607	16-6-2013	Sun	1614	V WITN (x3) DE GNXG (x2) (Cont'd) //4590	CW	(JPL)
M89	4512	16-6-2013	Sun	1618	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	3797	16-6-2013	Sun	1618	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	6840	16-6-2013	Sun	1620	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	4860	16-6-2013	Sun	1620	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	3330	16-6-2013	Sun	1625	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	5555	16-6-2013	Sun	1626	In tfc: R K. GA K. = = A43 . R 68 EEEE 1P K. 68W K. R R 3P K. 82W EEEE 82W K. R QSL 0045 K VVVVVV U AU34 AU34 AU34 AU34 AU34 AU34 AU34	CW	(JPL)
M89	5230	16-6-2013	Sun	1702	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //3642	CW	(JPL)
M89	3642	16-6-2013	Sun	1702	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5230	CW	(JPL)
M89	5500	17-6-2013	Mon	2000	V 7NPE (x3) DE QV5B (x2) (Cont'd) //4225	CW	(JPL)
M89	4225	17-6-2013	Mon	2000	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	10998	17-6-2013	Mon	2002	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	4590	17-6-2013	Mon	2003	V WITN (x3) DE GNXG (x2) (Cont'd) //7607	CW	(JPL)
M89	7607	17-6-2013	Mon	2003	V WITN (x3) DE GNXG (x2) (Cont'd) //4590	CW	(JPL)
M89	3797	17-6-2013	Mon	2004	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	4512	17-6-2013	Mon	2004	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	3330	17-6-2013	Mon	2005	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	7602	17-6-2013	Mon	2007	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	6840	17-6-2013	Mon	2020	VVV (x3) Q2M DE NYZ (x2) QSA ? K	CW	(JPL)
M89	8110	18-6-2013	Tue	0014	V 7NPE (x3) DE QV5B (x2) (Cont'd) //7582	CW	(JPL)
M89	7582	18-6-2013	Tue	0014	V 7NPE (x3) DE QV5B (x2) (Cont'd) //8110	CW	(JPL)
M89	8789	18-6-2013	Tue	0016	V WITN (x3) DE GNXG (x2) (Cont'd)	CW	(JPL)
M89	10640	18-6-2013	Tue	0020	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	6840	18-6-2013	Tue	0020	VVV (x3) Q2M DE NYZ (x2) QSA ? K //10640	CW	(JPL)
M89	8110	18-6-2013	Tue	1001	QV5B msg: UGT COMM BT 3819/1855/Z67/928. AR (see N&O 189) //7582	CW	(JPL)
M89	7582	18-6-2013	Tue	1001	QV5B msg: UGT COMM BT 3819/1855/Z67/928. AR (see N&O 189) //8110	CW	(JPL)
M89	6840	18-6-2013	Tue	1020	VVV (x3) Q2M DE NYZ (x2) QSA ? K //10640	CW	(JPL)
M89	10640	18-6-2013	Tue	1020	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	8789	18-6-2013	Tue	1027	V WITN (x3) DE GNXG (x2) (Cont'd)	CW	(JPL)
M89	6773	18-6-2013	Tue	1029	V H2FL (x3) DE DRV8 (x2) (Cont'd) //8040	CW	(JPL)

Enigma	Freq.	Date	Day	UTC	Remarks	Mode	Ctrb
M89	8040	18-6-2013	Tue	1029	V H2FL (x3) DE DRV8 (x2) (Cont'd) //6773	CW	(JPL)
M89	5588	18-6-2013	Tue	1031	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	3330	18-6-2013	Tue	1516	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	4512	18-6-2013	Tue	1517	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	3797	18-6-2013	Tue	1517	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	4860	18-6-2013	Tue	1520	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	6840	18-6-2013	Tue	1520	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	5801	18-6-2013	Tue	1525	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //10180	CW	(JPL)
M89	10180	18-6-2013	Tue	1525	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5801	CW	(JPL)
M89	7607	18-6-2013	Tue	1527	V WITN (x3) DE GNXG (x2) (Cont'd)	CW	(JPL)
M89	10998	18-6-2013	Tue	1528	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	10998	18-6-2013	Tue	1921	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	3330	18-6-2013	Tue	2128	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	10180	18-6-2013	Tue	2130	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5801	CW	(JPL)
M89	5801	18-6-2013	Tue	2130	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //10180	CW	(JPL)
M89	7607	18-6-2013	Tue	2134	V WITN (x3) DE GNXG (x2) (Cont'd) //3725	CW	(JPL)
M89	3725	18-6-2013	Tue	2134	V WITN (x3) DE GNXG (x2) (Cont'd) //7607	CW	(JPL)
M89	10998	18-6-2013	Tue	2136	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	5500	18-6-2013	Tue	2138	V 7NPE (x3) DE QV5B (x2) (Cont'd) //4225	CW	(JPL)
M89	4225	18-6-2013	Tue	2138	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	5500	19-6-2013	Wed	1054	V 7NPE (x3) DE QV5B (x2) (Cont'd) //4225	CW	(JPL)
M89	4225	19-6-2013	Wed	1054	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	10180	19-6-2013	Wed	1056	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	8789	19-6-2013	Wed	1058	V WITN (x3) DE GNXG (x2) (Cont'd) //10779	CW	(JPL)
M89	10779	19-6-2013	Wed	1058	V WITN (x3) DE GNXG (x2) (Cont'd) //8789	CW	(JPL)
M89	5588	19-6-2013	Wed	1100	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	8040	19-6-2013	Wed	1102	V H2FL (x3) DE DRV8 (x2) (Cont'd)	CW	(JPL)
M89	5500	19-6-2013	Wed	2045	V 7NPE (x3) DE QV5B (x2) (Cont'd) //4225	CW	(JPL)
M89	4225	19-6-2013	Wed	2045	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	7607	19-6-2013	Wed	2047	V WITN (x3) DE GNXG (x2) (Cont'd) //4590	CW	(JPL)
M89	4590	19-6-2013	Wed	2047	V WITN (x3) DE GNXG (x2) (Cont'd) //7607	CW	(JPL)
M89	3797	19-6-2013	Wed	2048	V H2FL (x3) DE DRV8 (x2) (Cont'd)	CW	(JPL)
M89	3330	19-6-2013	Wed	2050	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	8789	20-6-2013	Thu	0011	V WITN (x3) DE GNXG (x2) (Cont'd) //10779	CW	(JPL)
M89	10779	20-6-2013	Thu	0011	V WITN (x3) DE GNXG (x2) (Cont'd) //8789	CW	(JPL)
M89	8789	20-6-2013	Thu	1041	V WITN (x3) DE GNXG (x2) (Cont'd) //10779	CW	(JPL)
M89	10779	20-6-2013	Thu	1041	V WITN (x3) DE GNXG (x2) (Cont'd) //8789	CW	(JPL)
M89	8040	20-6-2013	Thu	1043	V H2FL (x3) DE DRV8 (x2) (Cont'd)	CW	(JPL)
M89	5588	20-6-2013	Thu	1045	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	10180	20-6-2013	Thu	1048	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	5801	20-6-2013	Thu	1250	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //10180	CW	(JPL)
M89	10180	20-6-2013	Thu	1250	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5801	CW	(JPL)
M89	7607	20-6-2013	Thu	1252	V WITN (x3) DE GNXG (x2) (Cont'd) //4590	CW	(JPL)
M89	4590	20-6-2013	Thu	1252	V WITN (x3) DE GNXG (x2) (Cont'd) //7607	CW	(JPL)
M89	4512	20-6-2013	Thu	1254	V H2FL (x3) DE DRV8 (x2) (Cont'd)	CW	(JPL)
M89	3330	20-6-2013	Thu	1255	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	7607	20-6-2013	Thu	1917	V WITN (x3) DE GNXG (x2) (Cont'd) //4590	CW	(JPL)
M89	7602	20-6-2013	Thu	1918	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	6840	20-6-2013	Thu	1920	VVV (x3) Q2M DE NYZ (x2) QSA ? K	CW	(JPL)
M89	8789	21-6-2013	Fri	0137	V WITN (x3) DE GNXG (x2) (Cont'd) //10779	CW	(JPL)
M89	10779	21-6-2013	Fri	0137	V WITN (x3) DE GNXG (x2) (Cont'd) //8789	CW	(JPL)
M89	7607	21-6-2013	Fri	1846	V WITN (x3) DE GNXG (x2) (Cont'd) //4590	CW	(JPL)
M89	4590	21-6-2013	Fri	1846	V WITN (x3) DE GNXG (x2) (Cont'd) //7607	CW	(JPL)
M89	3797	21-6-2013	Fri	1848	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	4512	21-6-2013	Fri	1848	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	7602	21-6-2013	Fri	1850	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //7602	CW	(JPL)
M89	3642	21-6-2013	Fri	1850	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //7602	CW	(JPL)
M89	3330	21-6-2013	Fri	1853	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	10998	25-6-2013	Tue	1744	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	10998	25-6-2013	Tue	2041	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	5500	26-6-2013	Wed	1007	V Y1E DE F6L QS. K. R MSG 8 K. QSA QSA K	CW	(JPL)
M89	8789	26-6-2013	Wed	1012	V WITN (x3) DE GNXG (x2) (Cont'd) //10779	CW	(JPL)

Enigma	Freq.	Date	Day	UTC	Remarks	Mode	Ctrb
M89	10779	26-6-2013	Wed	1012	V WITN (x3) DE GNXG (x2) (Cont'd) //8789	CW	(JPL)
M89	6773	26-6-2013	Wed	1013	V H2FL (x3) DE DRV8 (x2) (Cont'd) //8040	CW	(JPL)
M89	8040	26-6-2013	Wed	1013	V H2FL (x3) DE DRV8 (x2) (Cont'd) //6773	CW	(JPL)
M89	5588	26-6-2013	Wed	1015	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	6840	26-6-2013	Wed	1020	VVV (x3) Q2M DE NYZ (x2) QSA ? K //10640	CW	(JPL)
M89	10640	26-6-2013	Wed	1020	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	3797	26-6-2013	Wed	1615	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	4512	26-6-2013	Wed	1615	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	3330	26-6-2013	Wed	1616	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	5230	26-6-2013	Wed	1617	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //7602	CW	(JPL)
M89	7602	26-6-2013	Wed	1617	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5230	CW	(JPL)
M89	4590	26-6-2013	Wed	1619	V WITN (x3) DE GNXG (x2) (Cont'd)	CW	(JPL)
M89	4860	26-6-2013	Wed	1620	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	6840	26-6-2013	Wed	1620	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	7602	26-6-2013	Wed	1905	V DKG6 DKG6 DKG6 de 3A7D 3A7D	CW	(FN)
M89	10998	26-6-2013	Wed	1915	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	5230	26-6-2013	Wed	1929	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //7698	CW	(JPL)
M89	7698	26-6-2013	Wed	1929	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5230	CW	(JPL)
M89	3797	27-6-2013	Thu	1615	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	4512	27-6-2013	Thu	1615	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	4590	27-6-2013	Thu	1712	V WITN (x3) DE GNXG (x2) (Cont'd) //7607	CW	(JPL)
M89	7607	27-6-2013	Thu	1712	V WITN (x3) DE GNXG (x2) (Cont'd) //4590	CW	(JPL)
M89	3642	27-6-2013	Thu	1714	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5230	CW	(JPL)
M89	5230	27-6-2013	Thu	1714	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //3642	CW	(JPL)
M89	3330	27-6-2013	Thu	1717	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	6840	27-6-2013	Thu	1720	VVV (x3) Q2M DE NYZ (x2) QSA ? K	CW	(JPL)
M89	7602	27-6-2013	Thu	1855	V DKG6 DKG6 DKG6 de 3A7D 3A7D	CW	(FN)
M89	10235	27-6-2013	Thu	2131	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	7607	28-6-2013	Fri	1655	V WITN (x3) DE GNXG (x2) (Cont'd) //4590	CW	(JPL)
M89	4590	28-6-2013	Fri	1655	V WITN (x3) DE GNXG (x2) (Cont'd) //7607	CW	(JPL)
M89	3330	28-6-2013	Fri	1657	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	5230	28-6-2013	Fri	1658	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //3642	CW	(JPL)
M89	3642	28-6-2013	Fri	1658	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5230	CW	(JPL)
M89	5588	29-6-2013	Sat	1206	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	7607	29-6-2013	Sat	1210	V WITN (x3) DE GNXG (x2) (Cont'd)	CW	(JPL)
M89	10180	29-6-2013	Sat	1211	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	10998	29-6-2013	Sat	1213	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	6840	29-6-2013	Sat	1220	VVV (x3) Q2M DE NYZ (x2) QSA ? K //10640	CW	(JPL)
M89	10640	29-6-2013	Sat	1220	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	5230	29-6-2013	Sat	1445	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //7602	CW	(JPL)
M89	7602	29-6-2013	Sat	1445	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5230	CW	(JPL)
M89	5588	29-6-2013	Sat	1505	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	7602	29-6-2013	Sat	1806	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5230	CW	(JPL)
M89	5230	29-6-2013	Sat	1806	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //7602	CW	(JPL)
M89	7607	29-6-2013	Sat	1808	V WITN (x3) DE GNXG (x2) (Cont'd)	CW	(JPL)
M89	4512	29-6-2013	Sat	1810	V H2FL (x3) DE DRV8 (x2) (Cont'd)	CW	(JPL)
M89	3330	29-6-2013	Sat	1811	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	4860	29-6-2013	Sat	1820	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	6840	29-6-2013	Sat	1820	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	8789	30-6-2013	Sun	0028	V WITN (x3) DE GNXG (x2) (Cont'd)	CW	(JPL)
M89	8789	30-6-2013	Sun	0040	V WITN (x3) DE GNXG (x2) (Cont'd)	CW	(JPL)
M89	8101	30-6-2013	Sun	1057	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //10180	CW	(JPL)
M89	10180	30-6-2013	Sun	1057	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5801	CW	(JPL)
M89	8789	30-6-2013	Sun	1059	V WITN (x3) DE GNXG (x2) (Cont'd)	CW	(JPL)
M89	10180	30-6-2013	Sun	1613	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //7602	CW	(JPL)
M89	7602	30-6-2013	Sun	1613	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //10180	CW	(JPL)
M89	4512	30-6-2013	Sun	1615	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	3797	30-6-2013	Sun	1615	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	3330	30-6-2013	Sun	1618	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	6840	30-6-2013	Sun	1620	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	4860	30-6-2013	Sun	1620	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	7602	30-6-2013	Sun	1914	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)

Enigma	Freq.	Date	Day	UTC	Remarks	Mode	Ctrb
M89	3797	30-6-2013	Sun	1916	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	4512	30-6-2013	Sun	1916	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	5500	30-6-2013	Sun	1918	V 7NPE (x3) DE QV5B (x2) (Cont'd) //4225	CW	(JPL)
M89	3330	30-6-2013	Sun	1918	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	4225	30-6-2013	Sun	1918	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	6840	30-6-2013	Sun	1920	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	4860	30-6-2013	Sun	1920	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M8a	8135	11-6-2013	Tue	2300	???? 52002 65331. Missed callups	CW	(BCA)
MX	7039.1	15-4-2013		0300	Beacon "A"	CW	(IARUMS)
MX	7737	7-6-2013	Fri	0018	Beacon "V"	CW	(JPL-Sib)
MX	8497.8	7-6-2013	Fri	2214	Beacon "L"	CW	(JPL-Sib)
MX	8497.8	11-6-2013	Tue	1809	Beacon "L"	CW	(JPL-HK)
MX	10415	12-6-2013	Wed	1216	Beacon "V"	CW	(LG2)
MX	8497.8	13-6-2013	Thu	0117	Beacon "L"	CW	(LG2)
MX	16332	13-6-2013	Thu	0125	Beacon "C"	CW	(LG2)
MX	13528	13-6-2013	Thu	2004	Beacon "C"	CW	(LG2)
MX	16332	13-6-2013	Thu	2049	Beacon "C"	CW	(LG2)
MX	16331.7	13-6-2013	Thu	2058	Beacon "D"	CW	(LG2)
MX	10871.9	13-6-2013	Thu	2315	Beacon "S"	CW	(LG2)
MX	10872	13-6-2013	Thu	2315	Beacon "C"	CW	(LG2)
MX	16331.9	15-6-2013	Sat	1447	Beacon "S"	CW	(AB)
MX	8494.8	15-6-2013	Sat	1447	Beacon "P"	CW	(AB)
MX	16332	15-6-2013	Sat	1447	Beacon "C"	CW	(AB)
MX	10871.9	15-6-2013	Sat	1447	Beacon "S"	CW	(AB)
MX	16331.7	15-6-2013	Sat	1447	Beacon "D"	CW	(AB)
MX	8497.8	15-6-2013	Sat	1447	Beacon "L"	CW	(AB)
MX	10871	15-6-2013	Sat	1447	Beacon "C"	CW	(AB)
MX	10871.7	15-6-2013	Sat	1447	Beacon "D"	CW	(AB)
MX	4325.9	15-6-2013	Sat	1849	Beacon "R"	CW	(AB)
MX	13527.7	15-6-2013	Sat	1849	Beacon "D"	CW	(AB)
MX	13528	15-6-2013	Sat	1849	Beacon "C"	CW	(AB)
MX	7037.2	15-6-2013	Sat	1849	Beacon "D". New freq?	CW	(AB)
MX	4505.5	15-6-2013	Sat	1849	Beacon "V"	CW	(AB)
MX	16332.2	16-6-2013	Sun	0603	Beacon "F"	CW	(AB-HK)
MX	13528.2	16-6-2013	Sun	0603	Beacon "F"	CW	(AB-HK)
MX	6917.5	16-6-2013	Sun	0940	Beacon "L"	CW	(JPL-FNL)
MX	7038.9	16-6-2013	Sun	2116	Beacon "S"	CW	(AB)
MX	6917.5	16-6-2013	Sun	2116	Beacon "L"	CW	(AB)
MX	7038.7	16-6-2013	Sun	2116	Beacon "D"	CW	(AB)
MX	4325.9	16-6-2013	Sun	2116	Beacon "R"	CW	(AB)
MX	8497.8	16-6-2013	Sun	2116	Beacon "L"	CW	(AB)
MX	7037.2	16-6-2013	Sun	2116	Beacon "D"	CW	(AB)
MX	10871.7	17-6-2013	Mon	0420	Faulty "D" beacon "OODDDDOODDDDOO"	CW	(WP3)
MX	10872	17-6-2013	Mon	0420	Beacon "C" Moscow	CW	(WP3)
MX	10871.9	17-6-2013	Mon	0420	Beacon "S" Severomorsk	CW	(WP3)
MX	7037.2	17-6-2013	Mon	1736	Beacon "D"	CW	(AB)
MX	10871.7	17-6-2013	Mon	2151	Beacon "D"	CW	(HS-HOL)
MX	10872	17-6-2013	Mon	2151	Beacon "C"	CW	(HS-HOL)
MX	10871.9	17-6-2013	Mon	2151	Beacon "S"	CW	(HS-HOL)
MX	7037.2	17-6-2013	Mon	2251	Beacon "D" malfunctioning. Sample: "DNDDNTDNDDMDDTDDD" //7038.7	CW	(HS-HOL)
MX	7038.7	17-6-2013	Mon	2251	Beacon "D" malfunctioning. Sample: "DNDDNTDNDDMDDTDDD" //7037.2	CW	(HS-HOL)
MX	7038.9	17-6-2013	Mon	2257	Beacon "S"	CW	(HS-HOL)
MX	8497.8	17-6-2013	Mon	2322	Beacon "L"	CW	(HS-HOL)
MX	10309	18-6-2013	Tue	1927	Beacon "F"	CW	(JPL-FNL)
MX	8497.8	20-6-2013	Thu	2137	Beacon "L"	CW	(SW2)
MX	5156.5	21-6-2013	Fri	1055	Beacon "L"	CW	(JPL-FNL)
MX	8494.8	22-6-2013	Sat	0913	Beacon "P"	CW	(AB)
MX	8497.8	22-6-2013	Sat	0913	Beacon "L"	CW	(AB)
MX	4505.5	22-6-2013	Sat	2048	Beacon "V" Khiva.	CW	(MPJ)
MX	4505.5	22-6-2013	Sat	2107	Beacon "V"	CW	(MPJ)

Enigma	Freq.	Date	Day	UTC	Remarks	Mode	Ctrb
MX	4505.5	23-6-2013	Sun	1833	Beacon "V"	CW	(AB)
MX	7038.7	24-6-2013	Mon	1941	Beacon "D"	CW	(AB)
MX	8497.8	24-6-2013	Mon	1941	Beacon "L"	CW	(AB)
MX	4505.5	24-6-2013	Mon	1941	Beacon "V"	CW	(AB)
MX	7038.8	24-6-2013	Mon	1941	Beacon "P"	CW	(AB)
MX	5154.7	24-6-2013	Mon	1941	Beacon "D"	CW	(AB)
MX	8494.8	24-6-2013	Mon	1941	Beacon "P"	CW	(AB)
MX	5154.8	24-6-2013	Mon	1941	Beacon "P"	CW	(AB)
MX	5156.8	24-6-2013	Mon	1941	Beacon "L"	CW	(AB)
MX	4325.9	24-6-2013	Mon	1941	Beacon "R"	CW	(AB)
MX	6917.5	24-6-2013	Mon	1941	Beacon "L"	CW	(AB)
MX	5156.8	25-6-2013	Tue	1912	Beacon "L"	CW	(AB)
MX	6917.5	25-6-2013	Tue	1912	Beacon "L"	CW	(AB)
MX	8497.8	25-6-2013	Tue	1912	Beacon "L"	CW	(AB)
MX	4505.5	25-6-2013	Tue	1912	Beacon "V"	CW	(AB)
MX	4505.5	26-6-2013	Wed	1935	Beacon "V"	CW	(AB)
MX	6917.5	26-6-2013	Wed	1937	Beacon "L"	CW	(AB)
MX	8497.8	26-6-2013	Wed	1937	Beacon "L"	CW	(AB)
MX	7029	30-6-2013	Sun	1935	Beacon "V"	CW	(JPL-Sib)
RAv	11354	5-6-2013	Wed	0530	Russian Naval Air Transport Moscow "Priboj" and unid aircraft	USB	(TR2)
RAv	11360	10-6-2013	Mon	1200	Korsar w/Polis, Proselok, Davlenie, Klarnetist in comms checks.	USB	(RP-MD)
RAv	11360	13-6-2013	Thu	1107	Korsar w/76738 reporting landing at undisclosed location w/fuel 40 tons.	USB	(RP-MD)
RAv	11360	14-6-2013	Fri	1158	Korsar w/86825 reporting altitude 210 & landing at Omsk.	USB	(RP-MD)
RNAv	11354	10-6-2013	Mon	1121	Priboj w/52651 (Russian Navy AN-26) reporting passing point at alt 3500 mtrs w/fuel 3000 kgs.	USB	(RP-MD)
S06	7982	3-6-2013	Mon	1900	349 0	AM	(HFD)
S06	6984	6-6-2013	Thu	1905	349 0	AM	(HFD)
S06	15910	10-6-2013	Mon	1815	832 0	CW	(HFD)
S06	6984	10-6-2013	Mon	1905	349 0	AM	(HFD)
S06	13585	10-6-2013	Mon	1915	832 0	USB	(HFD)
S06	6984	10-6-2013	Mon	1950	349 349 349 00000	AM	(GHn)
S06	14535	13-6-2013	Thu	1210	425 msg	AM	(GHn)
S06	6984	17-6-2013	Mon	1905	349 0	AM	(HFD)
S06	6984	17-6-2013	Mon	1905	349 349 349 00000	AM	(AB/FN/G Hn)
S06	6984	17-6-2013	Mon	1935	349 349 349 00000	USB	(GHn)
S06	6984	20-6-2013	Thu	1905	349 349 349 00000	AM	(AB/GHn)
S06	6984	20-6-2013	Thu	1905	349 0	AM	(HFD)
S06	13364	22-6-2013	Sat	1547	764 00000	USB	(FMB)
S06	6984	24-6-2013	Mon	1950	349 349 349 00000	AM	(GHn)
S06	4587	27-6-2013	Thu	1949	125 (R3) 048 048 49 49 11932...	USB	(FMB)
S06s	14977	5-6-2013	Wed	0740	745 231 6 79845 23164 78563 90896 34216 56534 231 6 00000	USB	(ATC)
S06s	10120	5-6-2013	Wed	0840	328.....	USB	(ATC)
S06s	9670	5-6-2013	Wed	0850	328.....	USB	(ATC)
S06s	9255	6-6-2013	Thu	0930	314 285 6=52401	USB	(HFD)
S06s	7630	6-6-2013	Thu	0930	314	USB	(HFD)
S06s	12952	13-6-2013	Thu	0900	167 420 5 88280 84116 53718 78285 34694 420 5 00000	USB	(AB)
S06s	13565	13-6-2013	Thu	0910	167 420 5 88280 84116 53718 78285 34694 420 5 00000	USB	(AB)
S06s	9255	13-6-2013	Thu	0930	314 285 6 52401 53919 92599 14500 74328 64125 285 6 00000	USB	(AB)
S06s	9763	13-6-2013	Thu	0940	314 285 6 52401 53919 92599 14500 74328 64125 285 6 00000	USB	(AB)
S06s	10290	14-6-2013	Fri	0930	516 470 8 61732	USB	(FN)
S06s	9655	14-6-2013	Fri	0940	516 470 8 61732	USB	(FN)
S06s	12110	19-6-2013	Wed	0730	745 213 6=74659	USB	(HFD)
S06s	14977	19-6-2013	Wed	0745	745	USB	(HFD)
S06s	9126	21-6-2013	Fri	0610	196	USB	(FMB)
S06s	6755	26-6-2013	Wed	0820	471 260 5 74638 ...	USB	(FN)
S06s	5835	26-6-2013	Wed	0830	471 260 5 74638 ...	USB	(FN)
S11a	8530	14-6-2013	Fri	0915	484/00	USB	(FN)
S28	4625	13-6-2013	Thu	0720	MDZhB 92 634 VALERON 36 ?? 67 03 Priyom	USB	(AB-EST)
S28	4625	13-6-2013	Thu	0722	MDZhB 79 191 LALDYKA 94 66 09 27	USB	(AB-EST)
S28	4625	13-6-2013	Thu	0723	MDZhB 18 835 GALMAN 14 85 88 72	USB	(AB-EST)

Enigma	Freq.	Date	Day	UTC	Remarks	Mode	Ctrb
S28	4625	13-6-2013	Thu	0724	MDZhB 97 357 TALAUD 02 15 99 40	USB	(AB-EST)
S28	4625	13-6-2013	Thu	0746	MDZhB 87 132 PALATOChNYJ 47 64 76 63	USB	(AB-EST)
S28	4625	13-6-2013	Thu	0808	MDZhB 05 183 BALANUS 22 13 31 19	USB	(AB-EST)
S28	4625	13-6-2013	Thu	0834	MDZhB 58 150 BALAMUTNYJ 24 35 58 30	USB	(AB-EST)
S28	4625	13-6-2013	Thu	0835	MDZhB 57 700 PALAVAN 58 38 60 08	USB	(AB-EST)
S28	4625	13-6-2013	Thu	1415	MDZhB 11 775 SAKSFUL 24 67 72 80	USB	(AB-EST)
S28	4625	13-6-2013	Thu	1416	MDZhB 66 996 ZAKORIUKA 56 84 12 79	USB	(AB-EST)
S28	4625	13-6-2013	Thu	1437	MDZhB 17 611 BAKLAZhNIK 90 04 82 65 PAKAN 43 02 16 55	USB	(AB-EST)
S28	4625	27-6-2013	Thu	0823	MDZhB 97 879 KAIK 97 36 23 59 Prijom	USB	(AB-EST)
S28	4625	27-6-2013	Thu	0843	MDZhB 22 918 LAZUTChIK 59 32 28 05 Prijom	USB	(AB-EST)
S28	4625	27-6-2013	Thu	0848	MDZhB 45 833 FAZULINA 55 30 70 74 KAZUALIZM 97 06 12 08 NAZO- LOK 13 65 57 82 Prijom	USB	(AB-EST)
S28	4625	27-6-2013	Thu	0852	MDZhB 52 479 POVREMENKA 96 08 77 13 VAKSA 23 11 76 30 BEL 46 89 99 34 KOVYLIANE 69 67 10 07 Prijom	USB	(AB-EST)
S28	4625	27-6-2013	Thu	0928	MDZhB 08 116 RAZLOZhKA 60 68 15 43 Prijom	USB	(AB-EST)
S28	4625	27-6-2013	Thu	0929	MDZhB 48 227 RAZBURA 42 28 57 49 Prijom	USB	(AB-EST)
S28	4625	27-6-2013	Thu	0957	MDZhB 27 023 BAZOAR 01 86 86 68 Prijom	USB	(AB-EST)
S28	4625	27-6-2013	Thu	1020	MDZhB 11 418 BAZHENJE 24 22 73 33 Prijom	USB	(AB-EST)
S28	4625	27-6-2013	Thu	1305	MDZhB 39 166 LAZhEK 62 48 98 76 Prijom	USB	(AB-EST)
S30	3756	24-6-2013	Mon	1941	Pip	CW	(AB)
S32	3828	24-6-2013	Mon	1941	Squeaky Wheel	CW	(AB)
V07	11182	2-6-2013	Sun	0720	112 112 112 1 (x5) 332 97 (x2) 43220 31071 ...24848 000 000	AM	(Dan)
V07	12182	9-6-2013	Sun	0700	112 112 112 000	AM	(Dan)
V07	11182	9-6-2013	Sun	0720	112 112 112 000	AM	(Dan)
V07	11182	16-6-2013	Sun	0720	112 112 112 1 very weak	AM	(Dan)
V07	10282	16-6-2013	Sun	0740	112 112 112 1 very weak	AM	(Dan)
V07	12182	23-6-2013	Sun	0700	112 112 112 000	AM	(Dan)
V07	11182	23-6-2013	Sun	0720	112 112 112 000	AM	(Dan)
V07	12182	30-6-2013	Sun	0700	Only heard audio test tones before message and then few unintelligible words. It seems a problem in speech synthesizer	AM	(Dan)
V13	15388	15-6-2013	Sat	0800	New Star #4	USB	(AB-HK)
V13	13750	15-6-2013	Sat	1218	New Star i.p.	USB	(AB-HK)
V13	13750	15-6-2013	Sat	1311	New Star i.p.	USB	(AB-HK)
V13	13750	16-6-2013	Sun	0600	New Star #3	USB	(AB-HK)
V13	13750	17-6-2013	Mon	1215	New Star i.p.	USB	(AB-HK)
V13	13750	17-6-2013	Mon	1301	New Star i.p.	USB	(AB-HK)
V13	13750	18-6-2013	Tue	0600	New Star #3. Flute tune and coded messages	USB	(AB-HK)
V13	13750	20-6-2013	Thu	0500	New Star #3. Tune + coded messages	USB	(AB-HK)
V13	13750	22-6-2013	Sat	0500	New Star #3. Tune + coded messages	USB	(AB-HK)
V13	13750	22-6-2013	Sat	0600	New Star #3. Tune + coded messages	USB	(AB-HK)
V13	13750	22-6-2013	Sat	1300	New Star. Tune + coded messages	USB	(AB-HK)
V13	13750	24-6-2013	Mon	0500	New Star. Tune + coded messages	USB	(AB-HK)
V13	15388	30-6-2013	Sun	0703	New Star i.p.	USB	(AB-HK)
V13	15388	30-6-2013	Sun	0806	New Star i.p.	USB	(AB-HK)
X06	14650	1-6-2013	Sat	1223	215346	USB	(FMB)
X06	14650	1-6-2013	Sat	1239	215346	USB	(FMB)
X06	16220	7-6-2013	Fri	0855	324165	USB	(FMB)
X06	11031	7-6-2013	Fri	0906	324165	USB	(FMB)
X06	14813	13-6-2013	Thu	1410		USB	(FMB)
X06	9352	14-6-2013	Fri	1920	Mazielka. Sequence 216354	USB	(FN)
X06	13875	15-6-2013	Sat	1503	Mazielka. Sequence: 414265	USB	(GHn)
XPA	10438	4-6-2013	Tue	1730	msg	MFSK	(HFD)
XPA	9938	4-6-2013	Tue	1750	msg	MFSK	(HFD)
XPA	9138	4-6-2013	Tue	1810	msg	MFSK	(HFD)
XPA	9137	4-6-2013	Tue	1811	491 491 491 1 491 491 491 1 491 491 491 1	MFSK	(AIK)
XPA	10438	11-6-2013	Tue	1730	491 491 491 000 491 491 491 000 491 491 491 000 03107 00001 00000 10140	MFSK	(AnEur)
XPA	9938	11-6-2013	Tue	1750	491 491 491 000 491 491 491 000 491 491 491 000 03107 00001 00000 10140	MFSK	(AnEur)
XPA	9183	11-6-2013	Tue	1810	491 491 491 000 491 491 491 000 491 491 491 000 03107 00001 00000 10140	MFSK	(AnEur)
XPA2	14739	16-6-2013	Sun	2103	Russian Intel, Moscow	MFSK	(MCO)
XSL	8588	22-6-2013	Sat	1312	Japanese Navy a.k.a. Slot Machine	QPSK 1500bd	(AB-HK)

Enigma	Freq.	Date	Day	UTC	Remarks	Mode	Ctrb
XSL	8313	22-6-2013	Sat	1312	Japanese Navy a.k.a. Slot Machine	QPSK 1500bd	(AB-HK)
XSL	6445	22-6-2013	Sat	1312	Japanese Navy a.k.a. Slot Machine	QPSK 1500bd	(AB-HK)
XSL	6417	22-6-2013	Sat	1312	Japanese Navy a.k.a. Slot Machine	QPSK 1500bd	(AB-HK)
XSL	6250	22-6-2013	Sat	1312	Japanese Navy a.k.a. Slot Machine	QPSK 1500bd	(AB-HK)
XSL	4231.5	22-6-2013	Sat	1312	Japanese Navy a.k.a. Slot Machine	QPSK 1500bd	(AB-HK)
XSL	4153	22-6-2013	Sat	1312	Japanese Navy a.k.a. Slot Machine	QPSK 1500bd	(AB-HK)
XSL	8703.5	22-6-2013	Sat	1312	Japanese Navy a.k.a. Slot Machine	QPSK 1500bd	(AB-HK)

CONTRIBUTORS

AB	Ary Boender, Netherlands	JPL	JPL, Ontario, Canada
AB-EST	Ary Boender via remote rx Estonia	JPL-FNL	JPL via remote rx Finland
AB-HK	Ary Boender via remote rx Hong Kong	JPL-HK	JPL via GlobalTuners Hong Kong
AIK	Douglas, Israel	JPL-RUS	JPL via remote rx Russia
AnEur	Anonymous Europe	JPL-Sib	JPL via remote rx Siberia
AnHNG	Anonymous, Hungary	JU	Jay Updike, W. Europe
ATC	Tony, UK	KC2TTK	KC2TTK, NY, USA
BCA	Brandon Longo, CA, USA	KK2	Kristian K, Central Europe
BCA-HOL	Brandon Longo via remote rx Netherlands	LDO	Leif Dehio, Germany
BCI	Bruno Casula, Italy	LG2	Les G, UK
Dan	Daniel, Argentina	MCO	Mike Chace-Ortiz, PA, USA
DDY	Dave Dyer	MG	Manolis, Greece
EW	Eddy Waters, Australia	MPJ	Jim, SW England
FMB	FMB, Germany	RP-MD	Ron, MD, USA
FN	Fritz Nusser, Switzerland	skx	skeezix, MN, USA
GHn	Gary Hagermann, UK	SW2	Sam Wright, UK
HFD	Hans-Friedrich Dumrese, Germany	Tom	Tom, Lincs, UK
HS-HOL	Hugh Stegman via remote rx Netherlands	TR2	Tony, UK
IARUMS	IARU Monitoring Service	WP3	Wolfgang Palmberger

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